

THIRD SERIES

OF

CURIOSITIES OF NATURAL HISTORY.



ROBINSON CRUSOE

THIRD SERIES:
CURIOSITIES
OF
NATURAL HISTORY.

BY
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IN TWO VOLUMES.

VOL. I.



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A SLIGHT TRIBUTE

To the Memory

OF

MY FATHER AND MOTHER,

WHO LIE BURIED IN ISLIP CHURCHYARD,

IN THE COUNTY OF OXFORD.

P R E F A C E.

IN the following pages will be found some of my experiences during the last few years.

The subjects treated are certainly very various. I have always made it a rule to learn all I can wherever I go.

I have not attempted in this Third Series of "Curiosities of Natural History" to form a continuous story, thinking that the separate subjects would be more acceptable to the reader if kept distinct.

Nevertheless, I have in some degree attempted a classification. Thus, under the head of "Expeditions" will come (in Vol. I.) accounts of what I observed at and about Southsea and Portsmouth, Knaresborough (Yorkshire), Berkshire, Hampshire, and the neighbourhood of London.

In my excursion to Connemara and Galway, I give the results of a patient investigation into the *Practical*, Natural History view of that most important and valuable article of food for the Public, the Salmon, together with observations on the Cultivation of Rivers; and I finish the volume with accounts of Lions, Tigers, Hippopotami, Foxes, &c.

In Vol. II., I give my experiences of Porpoises; and then (as I never neglect any opportunity of visiting Public Exhibitions of any sort or kind), I give an idea of what I saw in *some* of them, beginning with Giants and ending with Growing Plates.

I could not resist this opportunity of telling my readers somewhat of my experiences in what may be generally called "Antiquities," under which head may be placed my notes on the Church Crypts at Ripon and Hythe, as well as an account of my labours in the vaults of St. Martin-in-the-Fields, Charing Cross, when in search of the remains of the illustrious John Hunter.

I have also placed on record certain facts, relative to the skull of Ben Jonson, never before made public.

In the Appendix I have introduced notes relative to the subjects treated of in the text, and have introduced, as quotations from "The Field," correspondence bearing on these subjects, without which many of my stories would not have been complete.

Experiences such as I have given in these two volumes are not speedily accumulated.

For more than seven years I gave to "The Field" newspaper my best labours, by contributing weekly articles to its columns.

Of these contributions, by legal agreement, I retain the copyright, and therefore reproduce from that journal selections of my writings, with alterations, additions, and amendments.

Owing to the treatment I received, my connection with "The Field" has now entirely ceased.

I have to offer my thanks to the proprietors of the "Leisure Hour" and "Household Words" for their kindness in allowing me to reproduce some of my articles previously published.

I have endeavoured in these writings to give credit to all who have afforded me any information, or have shown me any acts of kindness, and I have mentioned no names without permission.

I hope shortly to have the opportunity of enlarging my views on Natural History as applied to *actual practice*: this especially as regards the cultivation of that mysterious yet important creature the Oyster, together with other questions which, being properly

argued and discussed, are likely to produce knowledge, by means of which the inhabitants both of the Land and Water may be made subservient to the uses and welfare of mankind.

As time advances, I feel more and more the loss of the advice, experience, learning, and interest of my Father. I fear I shall never again find a friend like him.

FRANK BUCKLAND.

*37, Albany-street, Regent's Park,
December 16th, 1865.*

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CURIOSITIES OF NATURAL HISTORY.

ROBINSON CRUSOE AT PORTSMOUTH.

ONE fine warm day in the summer of 1863, being tired out with the heat of London and incessant work, I stretched myself out upon the shingle near Southsea Castle, and was soon dozing in the morning sun. I was ere long awoke by hearing the splash of an oar, and jumping up hastily, saw, good reader, the appearance which, by the aid of the pencil of Mr. Hyde Briscoe, the artist, I am now enabled to place before you.

I observed a little way from the shore a queer-looking old man sitting in the smallest boat that could contain a human frame, and gazing fixedly at me. The old man's face was browned by long exposure to the sea-breeze; his grizzled hair, like a bunch of seaweed, hung loosely about from under his cap; his dress consisted principally of rags of old blue sailors' skirts. He had but one hand, with which he sculled his boat, which contained his rude tackle and himself. Notwithstanding his dress and turn-out, the old man's countenance was beaming with intelligence, and from under

his well-formed forehead gleamed two telescopic-looking eyes, indicating an observant and reflecting mind, showing that (as I afterwards found out) he was no ordinary person.

"By Jove!" said I, "well, I am lucky; here's Neptune himself! I never thought I should have had this chance. Good morning, my friend."

"Morning, sir," said he with a touch of his old sea cap.

"What have you been after, if I may ask?"

"Pout* fishing, sir, all night, and terrible bad luck of it, I've had, the tide was so cruel strong and the water was so slobby; only ketched a few pouts. But I lost such a lobster! I hauled him up alongside, and I got hold of his claw, but it was so big I could not grasp him with my one hand; and he was well hooked too, at first, but he give a jerk and a kick and dragged the hook straight, and he went down starn foremost thinking he had been plenty high enough up. Ah! he was a fine lobster, all twelve pounds, and worth four shillings to anybody."

"But what have you done with your other hand?" said I.

"Oh! I lost him too," answered my friend.

"Did you lose him just now?"

"No, sir. I lost him thirty years ago, when I was in her Majesty service as captain of the foretop on board the 'Hind' frigate, off Cape Horn, on the coast of Peru. I got him jammed between two water casks, and the doctor took the slack of him off."

"What's your name?"

* Whiting-pout.

“Well, my right name is George Butler, but they call me ‘Robinson Crusoe’ about these parts.”

I then bought his pouts, and proceeded to examine his boat, which he paddled ashore. Robinson Crusoe told me he had given a sovereign for her seven years ago. Such a boat it was!—more about the size and shape of the half of a house water-butt than a boat: so rotten, too, that a good kick would have sent it into a thousand bits. The planks started in many places, and there were great holes in the sides, mended with bits of old canvas, leather, and tin. Her bottom was covered with sea grass and shells; yet in this boat old Robinson Crusoe faces weather in which no ordinary boat would live; he has no fear of the waves.

“I thinks the waves knows me sir,” said he; “they never hurts me and my boat. We swims over their tops like an egg-shell, and I am out a-fishing all weathers, particular when a storm bates a bit, because the water thickens, and the fish bites. My boat never ships a drop of water, not so much as there is run in this ere rum bottle.” The old man winked as he said this. “If I was a rich man, and got a thousand a year, I would still go out a-fishing, for I likes the sport; and I’d go to Greenwich Hospital, but then I’d lose my fishing. I am a very poor man, but I *must* have my fishing. I generally goes out of a night and fishes all night; but it’s terrible cold at times at night, and then I rigs up my hurricane house. I gets under my old tarpaulin tent and lies as snug as may be. The ships see me better, because I looks like a buoy, and I never mind rough weather; but it’s the fogs as is so deceiving. One morning I was off the Spit, when I thought I saw a man in a

boat coming : it was only a bottle cork as was floating, and at that time a wine bottle floating looked like a seventy-four. I saved the Irish steamer coming from London the other day in a fog. She was coming into Portsmouth, and I was fishing at the mouth of Langston harbour, when I hears her paddle-wheels a-coming. I halloes to her as how she was going stern on to the Lump Rocks, and so she was, if it had not been for me ; but they never gave me nothing at all for saving of them. It's much more lonely at night now than when I had my Puddles along with me."

"Puddles ! what's that ?"

"It's my cat, sir, and that's why they call me 'Robinson Crusoe,' 'cause of my boat and my cat. He was the wonderfulest water cat as ever come out of Portsmouth harbour was Puddles, and used to go out a-fishing with me every night. On cold nights he would sit in my lap, while I was a-fishing, and poke his head out every now and then, or else I would wrap him up in a sail, and make him lay quiet. He'd lay down on me when I was asleep, and if anybody come he'd swear a good one, and have the face off on 'em if they went to touch me, and he'd never touch a fish, not even a litle teeny trout, if you did not give it him. I was obliged to take him out a-fishing, for else he would stand and yoll and marr till I went back and catched him by the poll and shied him into the boat, when he was quite happy. When it was fine he used to stick up at the bows of the boat and sit a watching the dogs (*i.e.* dog-fish). The dogs used to come alongside by thousands at a time, and when they was thick about he would dive in and fetch them out jammed in his mouth as fast as may be, as if they was a

parcel of rats, and he did not tremble with the cold half as much as a Newfoundland dog: he was used to it. He looked terrible wild about the head when he came up with the fish. I larnt him the water myself. One day when he was a kitten I took him down to the sea to wash and brush the fleas out of him, and in a week he would swim after a feather or a cork.* He was a black cat natural, and I think the sea water made him blacker; his coat was as clean as a smelt, and had a noble gloss on it. I would not grudge a five-pound note, poor man as I am, to have my cat back. Oh dear! And Puddles was as good a cat for a rat as he was for a fish. I cleared out my cellar once, and I found twenty rats' skins as Puddles had killed, all scooped out as clean as your 'bacca-pouch, but the tails was not touched. He was a plaguey cat, though, for he would go out into the harbour to catch rats, and come in all dirty, and lay on my bed. I used to give him the cat. I says, 'So you've been up on my bed, have you? Now take your punishment like a man.' So I takes a nettle, and stands him on his fore feet on the bottom of the stairs, and gives him his dozen. He stood quiet enough while I gave him one dozen; but if I gave him thirteen, 'marr' he'd go, and away he'd fly as savage as could be. It was a bad day when I lost my Puddles; he was the most superb cat as was ever afloat. I thinks he was taken aboard a ship as went to the West

* While this story of how Robinson Crusoe trained his cat to the water was fresh in my mind, I saw some poor little children taken down to the bathing-machine and treated in a very different way to that in which George treated his Puddles. I would beg to refer the reader to the Appendix.

Indies. Sailors is terribly fond of cats,* leastways them as has only got one tail, or else he was killed for his fine skin (there was a terrible cry for cats' skins in Gosport at one time), and if I could only catch the beef-headed fellow as killed him, I'd up with my stump and hammer him like a stock fish. Them as is cruel to dumb animals is always cowards; and if I was a judge I'd soon clap the iron on their legs. I am going to bring up another cat to the water. I got a kitten at home now, but he won't act at all. I must get one before he can see, and in with him into the water, though my cat took to it of his own accord. Cats is terrible hard things to drown. There was a man the other day as wanted to drown a cat, so he tied a five-pound brick round his neck, and hove that ere cat with the brick on him into the water. But when he got home the cat was there fust; so he ties a stone on to the cat, but then he got sheer of the rope, for he gnawed it off with his grinders, and it was three times before he drowned that ere cat."

"I suppose you know the water pretty well, Robinson Crusoe?"

"Know the water, sir! I knows every depth of it

* "*Cats at sea.*—Our readers must have often wondered why seafaring men are so fond of taking cats with them on a voyage. This is explained by two circumstances. Marine insurance does not cover damage done to cargo by the depredations of rats; but if the owner of the damaged goods can prove that the ship was sent to sea unfurnished with a cat, he can recover damages from the shipmaster. Again, a ship found at sea with no living creature on board is considered a derelict, and is forfeited to the Admiralty, the finders, or the queen. It has often happened that after a ship has been abandoned some domestic animal, a dog or canary bird, or most frequently a cat, has saved the vessel from being condemned as a derelict."—*Once a Week*.

from Bainbridge Ledge to the Needle Rocks, for I have fished almost every foot of it; but it's the wracks* as harbours the fish most. The 'Royal George' used to be a capital wrack. A regular lubberly job that was. She went down holus bolus, she did; but they come and blowed her timbers all to pieces; and there arn't not a bit of timber nor yet a fish on that wrack now. The other wracks is only barges, and brigs, and such like. If I was a gentleman, I would just buy a lighter, and sink her, and in about two years she would be a splendid wrack. But there arn't one out of a dozen as knows the marks of the best wracks, as they don't take notice sufficient; and if you're a foot out of the mark, you may as well be at home and a-bed. I'll tell you the mark of the wrack where I just catched the lobster, as you seems a kind sort of a gentleman. You must open the white chimney on the edge of the mud battery, and then three little trees on the windmill, and that will bring you right on top of the wrack. It's the pouts as likes the wracks; they eats the little teeny long-pinchered crabs, no bigger than my thumb nail, and the sea woodlice, and such like; but a pout arn't particular like a conger or a whiting; and them heavy whiting do bite 'logie' dull like, but it's a curious thing as any fish will eat boiled cabbage or boiled onions, and they comes about the ships at Spithead for it. I knows of seven or eight wracks hereabouts where I fishes. The 'Boyne' is about as good as any of them. She was a fine ship was the 'Boyne.' She catched fire at Spithead (I think it was in 1798), and all her arms was shotted; they went off one after the other right among the fleet.

* Wrecks.

Her magazine was full of powder, so they set her adrift, and she took the ground in five fathom water, just at the edge of the Horse bank, and there she fired away till she blowed herself up, and she is now the wonder-fullest wrack about here. There's a wonderful sight of timber, and a wonderful sight of fish about her, and they always runs good. I fishes at her all the year round, and yet there's always fish, though sometimes you can't get a smell out of them, much less a bite. I once catched a hundred dozen of pouts in three bits of tide, and some of them was very fine pouts. The young flood is the time to catch 'em. Then they stops nearly an hour, and then comes in the whole body of the tide, but there ain't half so many pouts about as there used to be; it's the town gas as kills the fish. If a porpoise was to swallow one bladder of gas, as big as a halfpenny, as it comes out of Portsmouth harbour, he'd turn the turtle in a minute; it's real poison is gas."

"But how do you manage with one arm?"

"Why, sir, my stump's very useful. Though I have lost my right hand I still feels my fingers on, particular at the alteration of the weather. I holds my hooks down with the stump, and it's only made with an old bit of leather and a boy's spin top at the end; and I puts worms on with my left. I can feel a bite, and haul up the fish with my stump; but I often fishes with my mouth when my other hand is too cold that I cannot use him. There's some fine fish out far away by the Warner Light. I once catched three cod there, and fine fellows they were too. They come off the Horse Sands, where the floating light is; but there arn't many fish about the

Spit Buoy.* But we don't call it the Spit now ; we calls it the Crinoline Buoy. There's a bell hung up in her, as tolls with the waves, and there's seats all round enough to hold a dozen men, with chains round for them to catch hold of, and save the lives of the poor fellows as is wracked ; and I see the gentleman a papering the Crinoline Buoy as well as he is Robinson Crusoe." (See engraving.)—"Thank-ye, sir. Now I sha'll go and get a monkey full of one-water grog, and shall feel quite comfortable after my night's work. Glad to see you out fishing along with me, sir, if you don't mind a poor man's plain talk ; and I'll show you all the best wracks, for I knows where the fish lies at these tides, as well as any man as comes off the harbour ; and you seem fond of curioes, sir, and I catches some curioes sometimes. Will take you out fishing to-morrow if you like, sir, and show you some of the wracks."

The next morning, however, we were doomed to disappointment, for the great waves came thundering in, rattling the shingle backwards and forwards, and

* A few days afterwards we saw a curious-looking object coming along the shore. We ran up the bank, and, behold, it was our much-respected friend the *Spit* himself. Poor old fellow ! all the long winter had he been out at sea, buffeted about by every storm and every wave, and tolling his bell all the time. Alas ! he was worn out and wanted repairs. A boat-load of dockyard sailors were pulling him ashore, having fixed his "double" on his place at the edge of the *Spit* to take his turn at work during the summer. His white paint was nearly all washed off his rusty iron face, on which he wore a long beard of seaweed ; his belt was green as grass ; he reeled about, even in still water, as though he knew not for a moment what it was to be still. The letter T was washed out of his label-spit, and he looked like an old bull-dog with one eye. Never mind, old fellow, you've done your duty well ; I only hope they won't knock you to bits and sell your ribs for old metal to the Jews.

dashing their white foam against Southsea Castle, and as the old barnacle-backed sailor said of the weather in the Bay of Biscay, "After that it left off blowing, and went on anyhow."

After a while, however, the weather became favourable. We therefore at once determined to go fishing, and see whether, after their long holiday from hook and line, the fish would not be in a biting humour.

"How long shall we be out?" said my friend.

"As long as the fish bite," said I; "and we had better take some food with us, for there are no bakers' shops at the Spit Buoy, and they don't sell cheese at the 'Boyne.'"

"Morning, sir," said Barney, the civil and obliging provider of boats on the beach, and whose name was once Barnabas, but who never will be called anything but Barney again. "Better have the 'Laughing Jackass,' sir; she's all ready."

I have an unfortunate habit of looking after little matters, and knowing that there is a hole, which *ought* to be stopped up by a cork in the bottom of every boat, I examined to see if the cork was in its place; of course it was *not*, but luckily we were on land. We soon got one, and fastened it in tight, one of our party telling us that he once knew a young man who went out a little way to sea, and who, finding that there was a little water in the bottom of the boat, actually took the cork out of the hole to *let the water out*, quite forgetting that the water would rush *in*; it did rush in to his great surprise, and the boat was pretty nearly full before he could get ashore again.

We were soon out on to the marks Robinson Crusoe

had given up, and were wondering whether he would come to us. At last we were delighted to see the old man paddling away out of the harbour, and he was soon alongside, his handsome face radiant with smiles, for he had taken a great fancy to me, though he does not to everybody.

"Are we on the marks, George?"

"Not by a long ways, sir."

"Then just pft us right, like a good fellow, will you? Better come into our boat; we will tow your old tub astern."

"Don't you go to insult my old boat, sir, or I won't show you the wrack."

"Never mind, George, it's only a joke."

"Let go the anchor, boy," said George.

The boy picked it up, and spat on it.

"What's that for?" said I.

"That's for luck," said George, "and to make the fish bite; but it don't always, for a chap the other day spit on his anchor (and it was a bran new one, too); he heaved it overboard; but there was no cable bent on it, so he lost it right off, and was obliged to go home to fetch another. So he lost his anchor and his tide of fish too. The pouts are terrible thick about here. They lays all round the wrack, and you must just lay over 'em and get the anchor fixed right, or else you yaws out of 'em; but if you manages proper, you will yaw right in again, all amongst 'em. If you ain't exact on the mark, you might just as well put your line overboard on Southsea Common. Pouts is very nice in their feeding; catch more fish than my cat Puddles would eat, if he was

here, poor thing! The soldiers* is best bait for 'em in clear water, the lug when the water is thick; but I holds with lug for all that. When you ain't got no soldiers, and soldiers is terrible scarce about here, leastways them as wears shells and not red jackets—and soldiers in the sea shifts like soldiers on the land, you never find them long in the same place—nor yet you ain't got no lug, a bream cut up is as good a bait as anything; a nice fresh bream cut up is as good as a pint of lugs any day. The pouts generally runs pretty 'rubbly,' all of a size like, and they have got teeth in their mouths just like a Christian. I thinks they preys on one another. They're like the New Zealanders; they are run chaps, them fellows, for I have heard that when they have done with their wives they eats 'em. I've catched thousands and thousands of dozens of pouts, and I once catched a hundred dozens in three months, and then I dropped it. That was the time that they was working in the wrack a getting up the timbers, and the diver's seen the pouts all round the bait. He said there was millions of 'em, but they would not swim away from the line. When he was down there among the wrack, he seed a great lobster, and he ups and knocks him down with the crowbar. The pouts won't bite when the east wind is coming; the cattle knows it, and so does the pouts. I can tell by the biting of 'em as there is an east wind coming, and they knows it is a coming the day before it comes. This is a lucky wrack where we are on now, sir; and I catched some curioes on it once. I was out one day, and the pouts would not bite. I could not even get a smell out of

* Soldier crabs.

'em ; so I thought I would have a creep round with my anchor, just to pass the time, and the first haul I caughted an oyster drudge (dredge), the second I got a boat's anchor, and the third a bit of a boat's bottom, copper-fastened, and the fourth a great rope of the Ryde horse tow-boat, and the fifth I caughted nothing at all. Altogether what I did creep up fetched me four shillings."

"Tell me when pouts spawn, George."

"Well, sir, that hauls my capstan altogether. I have caughted millions of dozen in my time and never seed one in spawn yet ; and another curious thing is, the cock fish is more scarce than the females ; perhaps it is that the gentlemen is more cleverer than the ladies, and that ain't like our own species, is it, sir ?"

"Do they ever catch anything besides pouts about here, George ?"

"Yes, sir, sometimes they catches convicts a-floating about the harbour. A waterman was rowing along quiet enough one day when he sees a bushel basket floating along with the tide. He went up to it, and lifted it up to put it into his boat ; what was his surprise to find a living man's head underneath ! A convict had escaped the guard, and had somehow managed to get into the water, concealing himself under the basket. He was floating away unnoticed and unobserved out of the harbour, when the waterman, unfortunately for the poor chap, took a fancy to the basket and discovered him."

"Did they let him go, Robinson Crusoe ?" said I.

"Why, sir," was the answer, "the waterman had a good heart to let him go, but he was a Government pensioner, and was obligated to give him up, besides which they gives a sovereign for catching a convict, though it ain't

often one finds them floating about the harbour under baskets. There ain't no chance for the poor fellows with the basket plan again, as everybody as sees a basket in the harbour goes out to see if there ain't a convict under it. I've turned ever so many baskets over myself, but I ain't found no convict as yet; I ain't had the luck."

"And how's your stump to-day, George?"

"Oh! he's pretty nigh worn out, sir. The Government would give me a new one if I axed 'em for it, but they ain't got many wooden arms in store, though they've got plenty of wooden legs. I ain't going to trouble 'em at my time of life; this old one will serve my time, and I can always get a new peg-top to put in the leather part."

"Did the operation give you much pain; did you take chloroform?"

"No, sir, I never had no chloroform when I had my arm off; all I had was a claw of 'bacca in my mouth; but I still feels my thumb, as was taken off with my hand, and the wart on him is still one of the best theometers as I knows of. The doctor give me one of my fingers, and I brought him home and put him in a bottle of rum."

"I suppose you have been out in bad weather, in your old boat, sometimes?"

"Yes, sir. I waits till the wind 'bates a bit, and then out I goes, wet or dry. I never shipped a sea in her but once, and that was three buckets of water. That was an awful night, sir, that was enough to blow a Quaker's hat off. I was going away for Langston Harbour to get a tide of fish, and it came on to blow

when I was just outside the harbour. The waves was frightful to look at, just like hills rolling along. I see three great seas a coming one after the other frowning at me, and these big rolling seas always goes by threes all the world over, but these was frightful. So I says to myself, I must put my wits to work and double you, my gentlemen, or else it's all up with me; so I lowers my lug and looks out. The first sea broke just short of me, the second passed right under me before he broke, and before the third came I was in shoal water inside the harbour—and thank God for it! It was a lucky night for me, for as soon as ever the tide slackened I caught a terrible sight of fish—ten pounds of the beautifullest dabs as you ever see, and seventeen cod. I caught 'em fine, for they did bite that night. That's just the place where I once seed the biggest cod I ever did cast eyes on. I observed a spangle on the bottom, and then up he comes out of the grass. I puts my line overboard directly with a fine lug on it, and drops it right over his nose; so he swims up, opens his mouth, and sucks the lugs into it, and there I watched him just a tasting 'em like with his tongue. When I thought it was time, I jerks on my line, and the hook comes out of his great gape as easy as a straw out of a glass; so I tries him again. He takes it in his mouth again, cants up, and spits it right out in my face, and I never caught him after all. That's the way *that* gentleman served me; he knowed better than to get hooked."

"When do you go out fishing most, George?"

"I don't fish much of a day, sir; I fishes most of a night, and a'most every night, too, when it's anyways like weather. I got no clock, nor yet watch; but I've

got the stars, as will let me know the time to a quarter of an hour. There is one star in particular as serves me, and in a month's time I noticed there was never an hour's difference in her time."

"Do you ever go to sleep, George?"

"No, sir, I don't go to sleep; but I tell you what, sir, I think the *fish sleep* of nights—that's my experience of 'em. I've been out thousands of nights, and I've always observed as one particular hour is different from any other hour of a night, and that's *between twelve and one*. The fish never bites at that time, and after that hour is over they begins again, and keeps on till daylight; but *before* that hour they always fishes slack, and I can sleep between twelve and one if I likes, for it's no use heaving the line overboard; but after the clock strikes one the fish won't let me go to sleep, and I've always found it so. That's what makes me think the fish sleep; if they don't sleep they rises to the top of the water. As the water is thick, and it's a moonlight night, that's the time to catch 'em; if the water is thick, and it's dark too, the fish can't see the bait. They are on the bite, too, of frosty nights. I puts my sail over my head, and it gets as white as a sheet. I often prays for it *not* to come daylight, for I never feels cold as long as the fish bites.*

"The night is the best time to catch the congers, sir. The congers is as taffety fish as is; there's not a delicater fish as swims, and they are very nice in their feeding. If a whelk was to get on the bait, the conger would never touch it,—not if you was to bide all night; they are

* This paragraph started a long discussion in 'The Field' relative to the sleep of fishes. I would refer to the Appendix for many curious facts and observations.

regular bait-robbers them whelks. But when the congers gets on to the hook they lets you know it, and when you pulls 'em up, they curls their tails and holds a wonderful sight of water; it's ten to one if you don't lose 'em if you have not got strong gear. But you must have nice fresh bait. If there's a bone in the fish they won't touch it; Master Conger *will* have the first grab, or none at all. I've cut up a dozen pouts, and seen the conger smack at them all, and then he never takes them if they ain't quite as suits his taste. The biggest conger as ever I catched was in 'the grass'—(*i.e.* seaweeds)—at the back of the Gosport Hospital. Just as the sun goes down I hooks my gentleman, and says I to the man who was fishing near me, 'Joe, I've got him this time and no mistake, and a beautiful blue fish he is.' He towed me and my little boat round my anchor six times, and I got a good strong Dutch line—so strong that three men could not break it, for we tried it afterwards. Master Conger had got hooked outside of his teeth, still the hook had got a good strong holt, but yet it gave him the chance of chawing the line; and he kept on chawing it a good one, so I played him till at last I got him alongside, and tried to gaff him, and then he flew right at me out of the water. It was a terrible dark night, and I could hardly see, but I hit him a rap over the head with my stump, and then I was obliged to let him run again, or he would have slewed my arm right off, and pulled me out of the boat as well, for I could not slip my cable. At last I got terrible tired, and so did Master Conger, for he let me haul him up alongside; Joe then came up with his boat, and we both whipped our gaffs into him amidships, and jerked him into the boat. When he got aboard I

thought he would have knocked my old boat all to pieces, for he was fore and aft in a minute, and sent everything flying. I was only afraid he would get his tail on the gunwale (for congers is terrible strong in the tail) and then he would have hauled himself overboard; so I watched my chance, and hit him on the belly, where his life lays, and then he was quiet at last. He was all six foot long, and sixteen inches round the thickest part. His great head was like a sheep's head, and his jaws were awful. I sold over four shilling's worth of him, besides what I ate myself; and all along his backbone was fat, as fine and white as suet. He *was* a fish, he was!"

"Can you swim, George?"

"Swim, sir! I can swim like a fish, but I can't swim as well as a chap as I heard one night in 'Meriker, as offered to lay a thousand dollars as he would swim a voyage as far as a ship, if he only had a bag of peas for provisions, and an anchor and chain to bring him up at night."

We were having our lunch, and the line was "fishing by itself," when all of a sudden the top began to "bob, bob." The gyrations and play of the fish, four fathoms deep in the water, were so extraordinary that we could not make out the nature of the prisoner. Robinson Crusoe, however, at once pronounced that it was a lobster, "for he know'd by the bite of him." At last, up came the lobster to the surface, flapping his tail furiously and pulling backwards like a dog at a bit of carrion; but the line bent to him, tired him out, and at last we got him close to the boat. "Don't go to gaff him, Mr. Buckland; his shell is like glass, and you will lose him: *It* have him," said Robinson Crusoe. So,

watching his opportunity, he caught the lobster by the tail and whipped it into the boat in an instant. "That's a beautiful fish, sir, and it's a 'berried hen;' look at the spawn under her tail, sir. Mind your toes, boy, or he'll have one on 'em off in a nip. She is as spiteful as a mad dog now she's got catched, and if you torment her she is sure to shoot her claws, and that will spile her for boiling. Look how she's turning her great long horns fore and aft; and look here, sir, she's nipped this pout right in two with her pincers. 'Tis not often you catches a berried hen like this, and she's worth all two shillings. Look out, sir—sit fast, gentlemen: here comes the swell from that great lump of a packet as she is rounding the Spit buoy; that's the boat I saved when I was a-fishing off Lumps Bay, and now she wants to capsize us. She's bound to London now from the westward."

"Are there many lobsters about here, Robinson Crusoe?" said I.

"Why, no, sir, there ain't; but there would be plenty of 'em if it was not for the congers; they eats 'em when they slips their shell and they are quite soft. When it's loose they goes stern foremost agin the rock, and beats it off their backs; but a crab he'll crawl out of his shell, he will. A soft lobster is as good again as a hard one for eating, but the gentlefolks don't like 'em; they will only buy 'em when their shells is hard. When you puts lobsters in hot water they cries like a child. I once catched a terrible big lobster, he was 12 lb. full; I felt him crawling away with the hook, so I jerks it, and I pulled him right up to the surface of the water, and when he seed me he begun a fluttering, and gave a

jerk and pulled the hook quite straight, and sunk like a stone to the bottom."

"Did the hook kill him, George?"

"He die! Lor bless you, sir, he never died! He hurt *me* a precious sight more than I hurt *him*, for I was terrible put out at losing him; he'd have fetched me four shilling if I had catched him. Another time my pout-hook got foul of something, so I hauls it up, and what should it be but a boatswain's bucket, and sitting in it was Master Lobster, about 6lb. weight. He could not open hisself a bit, because he was jammed into the bucket, and did not know the way to get out.

"Lobsters ain't dangerous things like crabs. There was a man killed by a crab some years ago at the back of the Isle of Wight. He was down among the rocks at low tide, and he seed what they calls 'a pound crab' goin' into a hole in a rock. He had not got a gaff, or a crooked nail on a stick, with him, to fetch him out, so, foolish-like, he puts his hand in to him, and the crab felt his hand, and 'scrumped' up all his legs together, and jammed the man's hand into the hole. The poor fellow halloed and halloed, but there was nobody nigh to help him. He could not break the crab's shell with his fingers, and the crab kept his legs scrumped up at the hole; so the tide come up, and the poor man was drowned. When the tide went down they found him quite dead, with his hand still in the hole along with the crab."

"I suppose you have seen some fun when you were on foreign service, George. Now, come, spin us a yarn, for the pouts do not bite very freely."

"Well, sir, if you and the gentleman alongside of you wants a yarn, here goes.

"I recollects one night when we was off —, in the Mediterranean, we was going on to the ship with a officer, and we seed a young chap under a winder, and he was making the awfulest noises and faces as ever you heard or see, for all the world like a great jackass a braying; and then he stopped his noises, and puts his arm out like a windmill, and goes round like a weather-cock. 'Well,' says I to myself, 'if that's quality courting, it's a rum game.'" So by-and-by a young lady comes to the winder, so he catches holt of this ere young lady, collars, and runs off with her; so when we see this we run after him and the lady as he had got in his arms; and when we catched him, the officer gives him the pint of his cutlash, and says, 'You'd better drop her, young chap, or I heave you over the cliff!' so he drops her, there and then, and the officer says, 'Now you'd better cut and run, my dear; there ain't British officers always about under *your* windows when these ere foreign varmint is up to their larks.' But I thinks the officer went up to see the lady next day, for all that, to ax her if she catched cold. It is these ere foreign ladies as spiles themselves with paint, putty, and glue; a good slouch with a bucket of nice fresh water would bring it all off; the best paint as a lady can buy spiles her directly she puts it on. I likes to see the ladies come down to the shore in summer with their hair down: they ain't like the nuns in foreign parts; *they* gets cropped, and that spoils 'em just as much as paint."

"But who is coming now, George? Some poor old man in a boat, all by himself: why he can hardly get along at all. Who is he?"

"Why, sir, he is old George Brewer, but we calls him

‘Uncle.’ I knowed the old man as long as I knowed myself; he’s *no* fisherman, because he won’t be told; he thinks he knows, but he don’t know; he thinks he knows where the wrack lies, but he generally pulls up sixty yards one side or other of it; he is the oldest pensioner about here; he has received government money these sixty years, that’s all. How are you, Uncle? the gentleman wants to speak to you.”

“Why, you are getting on in years, Uncle,” said I, “How old are you?”

“I’m eighty-six come next Michaelmas. I was born in 1777.”

“I suppose you can recollect a thing or two we know nothing about, Uncle.”

“Why yes, sir: one of the first things as I recollect was my mother holding me up to see the masts and bowsprit of the ‘Royal George’ just after she went down, and I was in the glorious 1st of June along with Lord Howe, in the year 1794. There was thirty-five sail of the line; so after we had had our breakfasts, we hoists the bloody flag and goes down right among ’em, and we took a three-decker, ‘La Montagne,’ they called her. We killed a terrible sight of men that day, and all next day we was a heaving of ’em overboard. At last we come to one man what had got no legs, and he begged and prayed not to be heaved overboard, cause why, he warn’t dead. So the officer comes along, and we axed him what was to be done with this ere Frenchman who said he warn’t dead. So he said, ‘Oh, yes, he ain’t no good, he’s sure to die sooner or later, heave him overboard;’ so we heaved him overboard, and we never seed *him* again.”

"But did you never get wounded yourself, Uncle? you have lost an eye, have you not?"

"Lord, no, sir," said the old man; "I got two as good eyes as any man in the harbour"—and the old man lifted up his great shaggy eyebrows and showed us a couple of piercers—"but I did get a wound once, and that was in the year 1798."

"Where were you wounded, Uncle?"

"Oh! I was wounded on this ere leg, as I'm carrying about along with me now. I'm tarnation sorry as how I did not have him slewed off at once and a done with him, as George there did with his arm. This leg of mine has the rheumatics in him a long time, and torments me terrible of nights. If I had had him slewed off, I would have been much more thought of now; I'd a had a penny a day more pension, and that would have been more use to me than my leg, a precious sight; he will never be no good to me as long as he's on, and that's the very identical."

"But what luck have you had with the fish to-day, Uncle?"

"Lord, sir, I have been out since four o'clock this morning, and ain't caught a pennyworth."

"Of course he ain't," said old George; "he's been shifting about all the time, but he's a goodhearted old man; he never hurt a worm in all his life, unless it was to put her on a hook. Here Uncle, the gentleman says, will you have a drop of grog?"

"Thank ye, my son, I am terrible dry.* But I ain't

* I frequently saw the poor dear old man afterwards. He used to watch for Robinson Crusoe and myself going out fishing at the wracks and used to pull alongside. He always called me "my son."

got nothing to put the liquor in: never mind, here's my lug pot,* that will do." So the old man produced an old tin mug, one mass of rust. He threw out the lug worms, washed the cup in the sea, and drank up the beer, smacking his lips after it.

"Did you ever eat a lug, Uncle?" said I.

"Lord, ay, my son, to be sure I have. They are as bitter as soot, if you eats 'em raw, but they are as sweet as sugar if you cooks 'em. • I knows it, because I've eaten many a one when I cooked 'em in the fish."

The old man seemed impatient to be off, so we gave him a little money to buy himself some tobacco, and away went the poor old fellow back again into the harbour. May good luck follow him!

"George," said I, when the old man was gone, "did you ever ride on horseback? We will give you a job in the 2nd Life Guards if you like."

"Me ride! Lor sir, I am terrible frightened of a horse, more than I am of a Bengal tiger; I never was on a horse but once in my life, and then I fell off, and got a lump on my forehead as big as a coker nut. I'd sooner sit on a ship's truck in a gale of wind than I would on a horse. There's fish in the sea, little fellows as as got heads for all the world like a horse, and prances about with their flippers just the same as a horse prances: they brings 'em up sometimes in buckets off Jersey. There's things they call sea horses as well, up away round the Horn; ugly things as big as elephants, with great teeth under their chins. They are quiet enough unless you comes foul of 'em and molestes 'em; but if you knocks 'em

* Lug. The lug-worm, used for bait.

over the nose, they are done directly. They are no sea horses, they are walruses, and a walrus is a walrus : they lives on the ice along with the seals and bears and a precious set of varmint besides."

"Did you ever come across any pirates or smugglers, George, in the course of your travels?"

"Well, sir, I have been out a pirate-catching once or twice when I was aboard the 'Naiad' frigate, with Captain Spencer. There's a wonderful sight of pirates in the Mediterranean. What pirates we did not kill, we sunk; they shows you no mercy, and we shows them none; we kept any one what was any good, but them that was any good was as scarce as birds of paradise. A cowardly set of vagabonds is them pirates: a British sailor detests a pirate; he will either hang him or sink him."

"But how about the smugglers, George?"

"Oh! I knows something about them chaps. One night when I was out, close handy here, a pout-catching off the 'Boyne' wrack, I sees two men in a boat cruising about backwards and forwards: so they comes alongside, and says, 'What are you fishing for, old man?' 'For what I can catch,' says I. 'Do you ever catch any double-headed mackerel about here?' says they. 'There's somebody watching you on the Castle with a spy-glass,' says I; 'you had better cut and run. I knows what's what. I arn't *quite* such a fool as I looks.' So presently, off comes a six-oared cutter, with the coast-guard's men. And the captain of her says, 'Where's the buoy's chain lay, Robinson Crusoe?' 'Right under the buoy,' says I. So they weighed the chain then and there, and they got eighty-five tubs of spirits

as had got foul of the chain. The owner of 'em know'd this, but the preventive men never know'd it, and the owner has got hisself, fool as he was, to thank for showing the Custom-house officers where they was laying a hovering round the wrack, like a gull over a dead whale."

It is some time now since I saw good old Robinson Crusoe. But I should like to tell the reader the last I know of him. I invited a friend in the 1st Life Guards to go down and have a day or two's fishing with him. So I wrote to Robinson Crusoe, to say we were coming, and to tell him where to meet us. What was my horror, when I introduced my friend, to find that Robinson Crusoe had been to the barber's, and had his hair cut, and beard shaved. He had also got a clean shirt, and a new suit of clothes, so that he was quite spoilt as regards his Robinson-Crusoe-like appearance. I was much pleased to find that my writing about him in 'The Field,' had done the old man good, for he told us that one day a lady on board a yacht hailed him, and asked him if he was Robinson Crusoe that Mr. Buckland had papered. When the lady heard that Robinson Crusoe was before her, she ordered him to go down and get his dinner with the men. When he came on deck again, the lady presented him with a new boat that belonged to the yacht, and told him to take it away there and then. Robinson Crusoe was very grateful, and as proud as possible of her; but still he would not use her, preferring to go out fishing in his rotten old bit of a tub, which, as I have stated before, cost one sovereign seven years back. Robinson Crusoe came out with us in his old boat, and my friend and I determined

we would get hold of it somehow, or the old man, though he had a new boat, would continue to go out in her till one day she would come to pieces at sea and drown him. 'After a deal of trouble, we got Robinson Crusoe to accept a price for her, about ten times her value. The bargain concluded, we hauled her up on the beach, and taking a run, my friend and I simultaneously gave her sides a good kick. This was quite enough: she fell to bits like an orange box; and with a big stone or two, we soon broke her into bits so small that even Robinson Crusoe could not put her together again. While we were doing this, poor old Robinson Crusoe turned his back upon us. Tears ran down his manly, weatherbeaten face as he sadly looked on at our work of destruction.

"Don't ye behave cowardly towards the poor old thing, gentlemen," said he; "she has been a good servant in her day, and I wants the copper nails out of her, for she is true copper fastened."

We left our good old friend picking out the copper nails, and singing to himself the following Tennysonian ditty—

And as a token of true love,
Her gold ring she broke in two;
One half she gave to her own true love,
The other she sold to a Jew.

I advise visitors to Ryde or Southsea, who wish for a good day's sea-fishing to engage Robinson Crusoe. His address is—George Butler (Robinson Crusoe), "The Lord Nelson" public-house, Gosport, Portsmouth.

VISIT TO KNARESBOROUGH, YORKSHIRE.

IN September 1863, I obtained leave of absence from my medical duties as Assistant Surgeon of the 2nd Life Guards, and made the town of Knaresborough my head-quarters during my short holiday. At first sight, Knaresborough did not promise at all well, but eventually I found that there was "sport" to be had, and the following few pages will show my first visit was to the beautiful and well-known Dripping-well, at Knaresborough, in Yorkshire. I entered the enclosure where it is situated with a certain amount of fear, lest I myself should in a moment be converted into stone by this modern wholesale statue-maker; but I summoned up courage, and knocked at the door. It was opened by a civil Yorkshire lassie, and we saw before us this far-famed curiosity—a massive frowning rock, over which a perpetual shower of water fell incessantly, with a musical and somewhat melancholy sound, into the clear pool below. About half-way down, on the face of the rock, were suspended a number of curious-looking objects. I asked the girl to explain them. She at once

began pointing with a true Yorkshire accent and with wonderful volubility of tongue—

“There you will see a pumpkin and a stocking, a squirrel and a stock-dove, a small hotter, and a nedgeog (hedgehog), a branch and a pheasant, a man’s hat and a sponge, a moss basket and a bird’s nest, a weasel and a stocking.” •

“For goodness’ sake, my girl, gently, gently, say it over again,” but she was gone, other visitors knocked at the door; they also came down to where we were standing, and the girl began again, “a pumpkin and a stocking, a small hotter and a nedgeog” down to the stocking at the end of the sentence.

“Where’s my dog?” said my friend.

“He is gone,” said the girl. “We wants a curly dog, and if I catch him, I just hand im oop in t’well and petrify him.”

Poor Brittle had evidently taken warning from the fate of the “small hotter and a nedgeog,” and had fairly bolted for it, his tail between his legs, lest he should be “hung oop” and become petrified. We then left the girl and looked about for ourselves. The rocks about Knaresborough are composed of magnesian limestone, and the lime becomes dissolved in the spring-water—so highly charged, indeed, is it with mineral matter, that in a gallon of water there are of carbonate of lime 23 parts, sulphate of magnesia 11 parts, and sulphate of lime 132 parts, and a pint weighs 24 grains heavier than common water.

The water seems willing enough to get rid of its mineral burthen, and anything, therefore, placed within its reach, so to say, it converts into stone. The owners

of the well have taken advantage of this fact, and hung up miscellaneous objects which are ordinarily supposed to be converted into stone. This is not, however, actually the case; they are merely covered over with a coating of stone-like material, which, of course, takes the form of the objects which it encrusts. I have now before me a moor-hen and a "nedgeog" from the well at Knaresborough. The form of these creatures is not, as may be imagined, very well preserved: The hedgehog reminds one much of the hedgehogs made of sponge-cake which one sees in the pastrycook's shop. I have made a section of my fossil moor-hen, and found the stony coating very hard indeed, and much like in appearance, as indeed it is in composition, to the fur which is found inside ordinary tea-kettles. The feathers, bones, &c., of the bird have almost disappeared from decay. The cast, however, of it is accurately taken by the deposit from the well. I have also a wig, but this is a terribly shapeless mass, and very fragile.* In the show-room of the hotel by the inn are many really beautiful specimens of incrustations, particularly the birds'-nests and a pheasant, where the form is accurately preserved. There is also a badger, which would form an excellent museum specimen, for the traces of the rough hair are distinctly perceptible, even though it is one solid mass of stone. I have also a bird's-nest or two—thrush's, linnet's, and other small birds—the eggs

* My father, the Dean, frequently told me that he had an old wig, the property of the late Archbishop of York (Harcourt), in the attics of the Clarendon Museum, and that one day it was to be put in the museum. On the Dean's death we looked for it everywhere but could not find it. The Archbishop's wig had been sent to some dripping well, possibly Knaresborough, to be petrified.

in them. Both eggs and nests are hard and solid—in fact, a perfect mass of heavy stone, and very pretty ornaments for the drawing-room they are. I have broken one of these eggs, and find the egg-shell bright and white inside its stone-like cover.

The girl did not seem to know much more about the well than the explanations of the things hung up to petrify, so we crept about under the deep ledges of the rock, and found ample proofs of the wonderful Medusa-like power of this water. A mass of leaves, moss, sticks, &c., had evidently, at some time, been blown together by the wind up in the corner where we found them. We could see the individual leaves, moss, branches, &c., as plain as though they had just been brought there, but when I attempted to remove a leaf—no; it was hard, firm, fixed as solid as a wreath carved on a marble tombstone. A most beautiful group of natural objects were these; and much more striking than the hideous outstretched and deformed worsted stocking we saw hung up under the well.

This process of nature-casting has been taken advantage of by the art-loving Italians. At San Filippo, between Rome and Sienna, there also is a dripping-well; but the deposit in this case is white, like marble. The proprietors, wishing to turn the nature-manufactory to account,* “have placed under the drip moulds and medallions of antique heads, figures, &c., made of sulphur. The water, careless of results, artistic or not, has deposited carbonate of lime on the mould to the thickness of half an inch or more, taking a most

* I here quote from my “Curiosities of Natural History.” Second Series.

beautifully accurate cast of the figure *in relief*, the surface being very smooth and polished, answering to the surface of the sulphur. This deposit goes on so gradually, and with such minuteness, that even the lines in a delicate wood-engraving have been accurately moulded, and we have the picture in hard, solid carbonate of lime, instead of thin, perishable paper. If we reverse one of these stone pictures we shall find that the outside layer is exceedingly rough and indented, the results of the water dripping from the well." I have a case containing a number of these beautiful casts, brought by the Dean from Italy, and they are, I believe, almost unique in this country. I wish the worthy proprietor of "The Mother Shipton," the hotel at Knaresborough on the grounds of which the dripping-well is situated, would take the hint above given, and endeavour to cause his well to set to work, and become a candidate for a prize in the School of Design department of the South Kensington Museum.

A ROMAN RACECOURSE.

THE DEVIL'S ARROWS AT BOROBIDGE.

DURING my stay at Knaresborough I made an excursion, under the friendly guidance of Mr. Blenkhorn, to Borobridge. Among the numerous most interesting remains of that ancient Roman station, the "Devil's Arrows" stand pre-eminent. They consist of three enormous blocks of stone, which are found in a field close to the roadside, about a quarter of a mile from the town of Borobridge. The most northern arrow is 18 feet high, and 22 in circumference; the centre 22 feet high, and 18 in circumference, and of a square form; the most southerly is about a match to the centre one. They all lean a little towards the south-east. They have been decidedly squared by human hands, but no marks of the chisel are now to be seen. They have been said by some to be of an artificial composition. They are not so, but are of natural millstone grit, a kind of stone, which I may describe as hardened sand, thickly studded with small bits of quartz, reminding me much of a sago pudding suddenly converted into stone. They exhibit

curious gutter-ridges at the tops and down the sides, probably caused by the effects of wet and rain during the many hundred years they have been exposed to the storm and tempests. They are, in fact, huge stone giants, erected by a people long passed away. Their mysterious aspect, in their grim and silent solitude, makes the spectator regard them with a species of reverence and awe, which it is not easy to overcome. Now, the question arises, *who* put these stones in their present position, and *why* were they so placed? for at the present time they stand in solitary grandeur, and are, to modern eyes, "apropos to nothing in particular." Some folks will tell you that they are monuments of victory, erected by the Romans; others, that they are the work of ancient Britons, and were part of a temple used by the Druids. The common people, of course, have a legend, and ascribe them to Satanic influence,* for every great work of unknown origin is, by the unreflecting, invariably attributed to the Devil. He has been blamed, or rather praised, for building bridges and other useful erections in different places, and that, much to his credit, in a single night. On this occasion "meaning mischief," the legend says he took his stand upon How-hill (about seven or eight miles from this place, and near to Fountains Abbey), planted one foot firmly on the front of the hill, and the other on the back part, made a short declaration of his intentions in the genuine dialect of Yorkshire, thus—

Borobrigg keep out o'th' way,
For Audboro town
I will ding down—

* 'History of Borobridge.' 1853.

and then, discharging his stone bow, fairly missed his mark, the bolts falling short a mile of their object—hence the name “Devil’s Arrows.”

There can, however, in my humble opinion, be no doubt as to what they really are—that they were the *metæ* or goals (winning-posts, if you please) of an ancient Roman racecourse. With this idea in my head, I stood upon the top of a gatepost and looked round, and with “half an eye” I perceived that, if the hedges were removed, there would be a famous bit of galloping ground round these pillars; in fact, my wonder is that the Yorkshiremen of the present day, with their love of racing, do not use this spot even now as a racecourse. The course reminds me somewhat of Ascot, there being a rise in the ground at a distance just convenient enough to make the run-in of a good race more interesting.

As I stood on the gate, I could not help wondering if the day would ever come, when *our* grand stand, iron chains and pillars, of Ascot or Epsom racecourses would be dug up by some New Zealander who, standing, as I did, on the top of a gate, would wonder how the “ancient English” managed their races! That these curious Devil’s Arrows mark out an ancient Roman racecourse may be, I think, further argued out as follows. Aldborough, which is situated close by, was a Roman station—Isurium of old—of great importance in Roman times. That it was much frequented by Roman “swells,” can, I think, be proved by the numerous Roman pavements, only used by people of opulence—a fact, I think, I am in a position to prove. Now these fine old Romans were naturally what we might call a

“sporting set,” and celebrated their horse-races just as we do now. Being Yorkshire Romans they must naturally have imbibed the love of horses and horse-racing, which I believe is natural in the air of this celebrated county, and is so thoroughly transfused into the blood of the Yorkshiremen of the present day. Now how could the Roman nobles and gentry at Aldborough amuse themselves better than by racing; and where a better racecourse than in the fields close by the town in which the “Devil’s Arrows” now stand? And be it remarked, that the course marked out by these stones is as near as possible (as I am informed by Mr. Lawson of Aldborough) of the same measure as the well-known course at Rome, viz., 606 feet.

I shut my eyes to everything around—

Look back—look back—look back, these thousand years!

I imagine a Roman Derby-day, the grand stand—the *spina*—the Roman ladies assembled, all looking on at the fun, while their attendants held up umbrellas or parasols to keep off the sun—Decimina—Socia Juncina—Aurelia Censorina—Simplicia Florentina—Ælia Severa—Flavia Augustina—I get their names from their tombs now in York Museum—their hair decorated with *jet* ornaments, their garments of velvet or plush ornamented with crimson or purple stripes, their necklaces of yellow and green glass and coral and blue glass, their earrings of fine twisted gold wire, their bracelets of bronze, their brooches and hair-pins of mosaic work, heads strung on fine silver twisted, all gay and pretty. The reader may ask how I can describe the costumes of these ladies. The answer is, that these ornaments can

all be seen in the Museum at York, alas ! no longer on beautiful ladies, but in glass cases as curiosities. And then, to use a modern expression, "among the distinguished company assembled I noticed" the Roman officers Quintus Antonius, Isauricus ; Antonius Pius, and Marcus Nonius, of the legion Augusta ; Aurelius Superus, Claudius Hieronymianus, and Cæresius, centurions of the sixth legion, quartered at York ; Augustus Germanicus Dacius, and Lucius Duccius Rufinus, standard-bearer of the ninth legion, also from York ; with Titus Perpetuus, a rich civilian ; all come over from the regimental head-quarters at York, the colonel of the regiment in his *essedum*, or mail phaeton, the cornet in his *cisium*, or dog-cart, to see the races ; for Roman officers in those days were probably as great patrons of the racecourse as English officers are in our days. (I get the names of these Roman officers from the votary altars and massive stone tombs in the York Museum ; and that their regiments were quartered at and about York is well known to antiquaries.) These noble Roman lords and ladies, and many of the private soldiers, all assembled eager to view the race of the *bigæ* or pair-horse chariots, or the contest between the four-horse teams, the *quadrigæ*. Also the coachmen, the *agitatores*, standing on the floor of the chariots, *inside* their reins, to enable them to throw all their weight against the horses by leaning backwards. The cards of the races, the *libellæ* ; the *actuarii*, the gentlemen of the press ; the colours of the drivers, *factio—prasina* (green), *russata* (red), *venata* (purple), *albata* (white). The starting-post, the *alba linea* ; the starters, the *moratores* ; the race-cups, the *bravia*.

Sacri tripodes viridesque coronæ,
 Et palmæ pretium victoribus, armaque et ostro,
 Perfusæ vestes, argenti auriq̃ue talenti.*

The cards of the races, *Codices*; the gipsies, *Ambubiæ*; the shouting of the people to clear the course for the jockeys; the young Chifney of the day, named Priam, riding the favourite, a roan grey with white legs.

Quem Thracius albis
 Portat equus bicolor maculis, vestigia primi
 Alba pedis, frontemq̃ue ostendens arduus albam.†

The other jockey-boys, the light-weight "Atys," and then "Ascanius," riding a sidgety Sidonian Arab horse, of the breed so much prized by the fair Queen Dido; and the ruck of race-horses, half-Roman half-Yorkshire bred, all mounted by jockeys who *wore spurs* (for there is a spur in Mr. Lawson's museum, at Aldborough). They start at the sound of the trumpet.

The clangour of the trumpet gives the sign;
 At once they start, advancing in a line.

Truly, what a scene this must have been! The shouting, the betting, the Babel of a thousand tongues, talking Latin with an accent which we never have heard, and never can hear. The rise of the ruck of the racing chariots whirling up the hill,

* Green laurel wreaths and palm the victor's grace;
 Within the circle arms and tripods lie,
 Ingots of gold and silver heaped on high,
 And vests embroidered with the Tyrian dye.

† New honours adding to the Latin name,
 Right well the noble boy his Thracian steed became;
 White were the fetlocks of his feet before,
 And on his front a snowy star he bore.

Aurigæ undantia lora
Concussere jugis pronique in verbera pendent.*

The turning round the biggest of the Devil's Arrows, the crash of the chariot-wheel against it; the sparks flying from the crushed axle; the coachman upset—

And the whirlwind race is over his head,
Without stopping to ask if he's living or dead.

The cry for the Assistant-Surgeon of the Ninth Legion, who, of course, was present at the races in the "Harmamaxa," or regimental drag, from York; the queer surgical instruments and ointments!

Who would not indulge in such day-dreams as these? who would not visit the "Devil's Arrows," and in his imagination paint a Roman Derby-day?

Where are all these right brave Roman officers and soldiers now? where are the beautiful Roman ladies? Gone! gone! the pillars of their racecourse alone remain. As for *themselves*,

Their bodies dust, their arms are rust,
Their souls now lie in peace, we trust.

The fierce driver with great fury lends
The sounding lash, and ere the stroke descends,
Low to the wheels his pliant body bends.

A YORKSHIRE FISHING MATCH.

WHEN walking through the streets of Knaresborough I saw a bill in a shop window announcing that the Thirsk Mowbray Vale Angling Association would hold their annual angling match in the river Swale, on Tuesday, September 22. The rules, also, were given, viz., that "only one rod and one hook were to be used; every angler to bait his own hook and land his own fish; the places of fishing to be chosen by lot, and no one to put his rod together till the pistol fired," &c. &c.

Accordingly, I immediately entered the shop, and, being determined to see the fun, paid my entrance of 2s. Early on the morning of the match I found some five-and-twenty jolly anglers, true and good men, natives of Knaresborough, all waiting at the station anxious to start. The train came up, and away we went for Melmerby station, the match being about to be held at Skipton-on-Swale. Just before we arrived at, and while passing Ripon, it began (as the Yorkshiremen have it) "part rain," and the weather to be decidedly "soft"—in other words, it poured in torrents, and into this

drenching wet we had to turn out for a walk of four miles across the fields to Skipton Bridge, the headquarters of the angling match. It was great fun to see the various wet-weather costumes of my friends; most of them, indeed, carried umbrellas strapped to the rods, which were got out and hoisted with wonderful celerity. During the walk the anglers, though heavily weighted with tackle, baits, &c., were as lively and merry as possible, and the words "Tit, tit, tit," I observed invariably caused a laugh. It was a chaff that I did not understand, so I asked for the explanation. It appears that a certain angler once got fresh and had only a groat in his pocket; when looking over the bridge he saw a salmon seize and swallow a tomtit, so he went home and bought a bit of gut with his groat, and dressed up a fly like a tomtit; the next morning he fished for and caught the salmon, and when he opened it the tomtit flew out, crying "Tit, tit, tit," and closer scrutiny showed he had actually begun to build his nest in the stomach of his captor. Then another angler told us how that a notorious, for his excessive politeness, polite Yorkshire barber, who while shaving a rustic customer by candlelight, dropped the candle into his ear. "You're burning mee lug," said the indignant rustic; "Oh, thank you, sir! Oh, thank you, sir!" answered the barber. Another customer went to sleep while operated on by the same barber, who said, "Good-night to you, sir; pleasant dreams to you, sir;" and then sent in his wife "to charge for the gentleman's bed."

As we went along, our ranks soon began to thin, and the rear-guard was formed by myself, with a terribly heavy basket of tackle, because I was told the fish in the Swale

were "trout, cheven (chub), roach, eels, perch, barbel, carp, dace, gudgeon, jack, bream, burbolt, and all sorts,;" and not knowing what I might find, I had tackle ready for "all sorts." My friend, Mr. Houseman, was loaded like a Pickford's van. Rods, landing-net, umbrella, macintosh, worms, paste, brandlings, dew-worms, wasp grubs, lines, reels, bullets, split shot, beasts' brains, and "mawks," or gentles, which Mr. H. had that morning discovered in a hare which was hanging in his larder, so that, as Mr. H. observed, "he and his fish took the same bait." *He* was determined, like myself, to win the match if *tackle* would do it; so heavy, indeed, was his tackle and himself combined, that on our return home we weighed him at the station, tackle and all, and found that he turned the scales at several pounds over two hundred weight. The fish in his pocket must, however, be deducted for the sake of fairness, as *they* weighed 1lb. 6oz.

At last we arrived at Skipton Bridge, and met other parties of anglers from York, Leeds, Thirsk, Hampswaite, Borobridge, Knaresborough, Thornton-le-Moor, Sheffield, London, and other towns, also on the tramp to head-quarters. "Where do we go?" we asked of an old woman. "To t'house oop yon, at t'top of t'hill, there's a terrible cloud of folks at t'door." It was "a cloud of folks" indeed—a regular mass of anglers, all clustering round the door of the little public-house just like a swarm of great black bees, that had umbrellas for wings. The drawing for places was going on inside, the tickets being taken out of a beer jug and handed out of the window to the expectant anglers. At last my number was called, and off I went to the river, and a queer sight I saw. The whole of one bank of it was

regularly marked out with white pegs twenty yards apart, either peg having a number affixed to it. The angler who had the corresponding number was obliged to use his allotment, and no other, as his fishing ground. Reader, imagine 135 anglers in a row, reaching *about one mile and a half in total length*, all expectation and all anxiety to begin operations in their respective allotments, from each of which, with hardly any exception, a little cloud of tobacco-smoke coiled upwards into the damp and drizzling atmosphere. At last, about eleven, bang! went the pistol in the distance, off came the rod-coverings, and rods soon began to project into the river like the horns of a lot of great snails, the snails themselves being represented by the angler crouching in a mass under his umbrella. I never in my life saw more promising swims than in this river. These, however, only occurred every now and then; and, of course, many drew frightfully bad places. For instance, a friend who came with me, soon left off trying for a prize, because his swim was one thick hedge of tall willows, which he could not possibly *see* over, much less fish over. Mr. Houseman had a swim consisting of a shallow some two feet deep, and one solid mass of tangled weeds. The moment the fishing began, all chatter and noise ceased, and one might have imagined "the fishers," as they call them in Yorkshire, to be a lot of herons, so silent and quiet were they. Just at this moment a gamekeeper and his dog came up on to the bank on the opposite side of the river. I do not know which looked the most astonished, the man or his dog, at the sudden apparition of this long line of silent and motionless men. I myself had a capital allotment, with one nice little swim in it,

about the size of a dining-table, from which I expected great things. Tackle is often perverse when one wishes to be particularly careful. My tackle on this occasion was particularly obstinate and disagreeable, knotty, tangling, breaking, and in the most uncivil manner refusing to act; add to this, the very first cast I got foul of an immense branch that had chosen my swim as a capital resting-place; and in getting it out, I of course frightened every fish away from my twenty yards; add to this the pouring rain, wetting one's tackle-boots in the most painfully provoking manner. I waited a bit, and thought to myself, "Oh, these Yorkshire fish ain't up to snuff like the London fish;" but sad experience showed me that the Yorkshire *fish* are as sharp as the Yorkshire *men*. There must be something in the air of this celebrated county that puts an edge on to the wits of man and fish, for not a bite could I get. So I asked my next-door neighbours how they were getting on. They were in the same plight as myself. One of them had caught "an old woman's wig" (a bit of weed), and the other a lot of thatching-pegs, but no fish.

At length, after about an hour's silence, Mr. Houseman—who was the very last on the line, and a long way off—broke the silence and quiet by shouting out, at the top of his voice, "Tommy Parsee." Another fisher answered with a laugh, and also as loud as he could bawl, "Tommy Parsee." The word passed up the line, and everybody shouted, "Tommy Parsee." I have, after diligent and severe investigation, discovered that "Tommy Parsee" is Yorkshire for a little fish called prickle-back, and imagine that it is a Yorkshire fisher's war-cry, and that when he utters it he means he has no

sport. So we fished and fished, but no bites. At last bob-bob goes the float—I’ve got him ; and up comes a small roach, and immediately after another still smaller. I placed them on the bank, and my neighbour informed me that I was now *sure* of a prize—a man at the last meeting getting a second prize for two ounces and a half. So I took matters easy, and laid down my rod, and took a walk (contrary to the rules, by the way), to see what others were doing. I found most of the anglers fishing with a ledger—not a great heavy ledger, like the London barbel-ledgers, but one or two big shot on the gut just enough to sink the bait. Floats, too, were used ; but such tiny floats ! Just the cork of a small phial physic-bottle, sharpened at both ends, with a cut in it into which the line can be slipped. These Yorkshire fish are either so scarce, or else so knowing, that it requires the finest tackle to induce them to be caught. Most of the rods, I observed, were spliced, not jointed rods. They were nearly all painted green, and Nottingham reels far predominated over brass reels.

In about two hours, other anglers, who had bad places or who could get no sport, came wandering by.

“What thou got?”

“Nought ; nought.”

“You’re too keen, you’re too keen, man ; you strike too hard ; I myself ain’t had a smell, much less a nibble, all day, and I’ve gee it oop.”

Then came by “The Wandering Jew,” a drunken angler—the *only* misbehaved man, by-the-way, of all the large party—who had waited so long in the public-house for his ticket that he had got too much beer aboard. He carried all his tackle anyhow, like a bundle

of sticks, and lugged along a huge landing-net, into which he every now and then put his foot, and came tumbling over, like a shot hare. He said "he wanted his place, which was No. 24, and that he had been all day looking for No. 24, and everybody said there was no 24; but *he knew* there was 24, and if he walked all day, he would find it." He then claimed 115, which he swore was 24. He came bothering Houseman, who declared if he did not stop his noise and chatter, he would put him on his hook and fish with him.

Then came down a man with a report of what they had been doing at the other end of the line, and told the tall, thin old gentleman from Thirsk, who stood tiptoe on the very verge of a very soft mud-bank, and who fished as if his life depended on the result, that somebody had caught fish amounting to 6lb. weight. The old man, who was doing best of all in our quarter, opened his eyes wider than they were before, but went on fishing with redoubled silence and quiet. I expected every minute to see him topple into the river, so eager was he to win the cup. He did not seem inclined to answer the many queries put to him, and his only response was, "Grubb for chubb, grubb for chubb."

I myself caught two more little thin roach (I *did* get a prize for fish weighing altogether $7\frac{1}{4}$ oz. The highest prize was for fish weighing 4 lb. $6\frac{1}{2}$ oz.); and then, as the time of pistol-firing—five o'clock—got near, and we had fished since eleven, I left my allotment to see the "weighing in."

The pistol fired when I got near to the far end of the line, and the weigher-in came by, with a pair of scales and a note-taker behind him. I also took notes. The first man we came to had got his fish displayed on the grass.

"Into the scales with him. Name and number, sir," said the weigher—"3 oz., sir." "Now for the next man"—"4 oz.;" "The next"—"2½ oz.;" "The next"—"6 oz.;" "The next"—"By Jove! it's a jack; he'll get the prize! no he won't, the jack is only 8 oz.;" "The next"—"1½ oz.;" "The next"—"½ oz.;" "The next"—"¼ oz." (a little dace); "The next—Is that all ye're got?" "Yes." "Weigh him then." "By Jove he doesn't turn the scales *at all*." "Yes, he does. You've lost the prize, sir, he just turns the scales. You've rubbed him in the sand, sir, and made him heavier than he is naturally; if you had not you would have won the prize." "What prize?" said the man. "Why, the prize for the *smallest* fish, sir." "Why if I knowed that," said the man, "I dommed if ah would not ah fished for small fish all day long." "What fish is it?" said I, "let's look." "He is all covered with sand—what do you call him?" "Sithee munn, it's nought but a Tommy Parsee." "Thank goodness, then!" I exclaimed, "I *have* at last seen that mythical Yorkshire—what is it?" "A Tommy Parsee."* "Give him here; I must have him for my museum. What's the prize for him?" "Oh! it's a wooden spoon," said the weigher-in, "generally, for the *smallest* fish; but I must take him up to the chemist's and weigh him, because I think a fisher down yon has got a smaller." We then came to an old man who was still fishing, sitting below a very steep bank, on a basket surrounded with an immense display of tackle and bait for himself and for the fish. Bread and cheese, beer, gin-and-water, wasp grubs, worms, pastes, &c., were all spread about him in great profusion;

* A Tommy Parsee is the "Pope" of Thames anglers.

and every here and there an irate wasp came to reclaim her lost young robbed from her powder-destroyed nest. Our patient friend, whom we found fishing still, though the match had been over above an hour, was one mass of macintosh. It had done raining some three hours back—and he had a great sheet of macintosh bound like a tent-house over his “long-faced” hat.

“Yon youth got glazed,” said the weigher-in. “Hi! weigh oop thee fish, munn.”

The fisher turned round sulkily.

“I got nought.”

“I thowt t’would a catched nought,” was the answer. “Thee chap’s t’ wrong colour for the fish to bite.”

“I’ll just paw thee face, and gee thee a bang among yeer cen, thee hast plegged (angered) me,” was the answer.

The old man sulkily rebaited his hook, and I doubt not may be found in his fishing-box by the side of the Swale at this moment. As we got further down, the weight of fish somewhat increased, though the *first* prize was obtained for 4lb. 9oz. There cannot be many fish in the river, or else they will not bite. I leave this a point to be settled by philosophers. All being over, we again marched in line to the public-house. One of the anglers had caught a burbolt, which he very kindly, at Mr. Houseman’s request, gave to me, and upon whom I gave a clinical lecture to a select party. While the anglers were collected in knots waiting the announcement of the rewards of the prizes, I remarked that, though but very few had fish, *every* man had a landing-net. One fisher had a huge iron gaff, made by

a village blacksmith. These landing-nets were all fixed permanently into a long handle, and the bottom of the handle had a piece of iron fixed into it exactly the shape of a boat-hook, viz., a spike and a crook; the crook is of great use for unhitching tackle from trees, and the spike serves to stand the net upright in the ground. I strongly recommend this addition to the landing-net to all anglers. As the 135 men were standing about in knots talking over the events of the day, the 135 landing-nets stood well in relief against the sky. They had the most curious possible appearance, reminding one of a party of New Zealanders with their clubs all ready for the assault at the sound of the war-cry, "Tommy Parsee."

It has been remarked by somebody who knows nothing about their subject, that the notion that fishermen are a pacific race is a mistaken idea. I for my part can only say that my experience of the very pleasant day with the Yorkshire anglers showed great good-feeling and mutual friendliness and excellent behaviour among a large number of men of the most varied characters and dispositions; in fact, I have generally found that anglers are a peaceful and kind-hearted set of men. I have only one regret to make as regards the match in which I had the honour of competing, and that is, that there was not a prize for those who *had no bite*, but I fancy this prize was not offered, as there would have been too many competitors; for of fifteen jolly anglers who were placed all of a row, all showed blank returns, not one of them having had a nibble all day, much less a bite, so that arbitration would have been difficult. Such matches as these, I am sure, do the

cause of angling much good ; and I shall certainly (if the London anglers support the notion) some summer endeavour to get up a similar match for Thames anglers. People get to know each other, and much fun and friendly chaff is elicited. Though the prizes were small, and in some cases laughable, it must be remembered anglers do not care so much for the value of the prizes, nor yet for the fish they catch, but for the encouragement of good feeling, and friendly emulation, and good fellowship among all lovers of the "gentle art."

The following were among the prizes :—

A handsome silver cup, value 7*l.*, a set of china breakfast service, a fishing-rod and basket, an electro-plated silver cup, a coffee-pot, a loaf of sugar, a coffee-kettle, a fishing-rod, a large basket and flask, half a dozen knives and forks, a landing-net, with fording ring ; a looking-glass, a prime cheese, a brass pan, hair-brush and comb, a pair of ladies' boots, a bible, a fishing-hook, a leg of mutton, one pound of tobacco, one pound of tea, a meat-saw, a waistcoat-piece, a carving knife and fork, a pair of wool shears, a bait-can, a metal inkstand, packet of fishing-tackle, a photographic album, a tin tea-kettle, a basket, a wood reel, a brass reel, a pocket-knife, a tobacco-jar, a pocket-knife, a fancy basket, for the *smallest take of fish*, a line and fly-tweezer, for largest fish (21*lb.* 8*oz.*), a handsome wood reel.

So much, then, for the Yorkshire fishing match, and good luck to the jolly fishers at their next match !

COLLECTION OF CURIOSITIES AND ANTIQUITIES.

I HAVE always been a great advocate for the formation of local museums in country and market towns, and this because there is hardly any town in England which has not some local antiquities and curiosities, which, if exhibited at stated times and occasions, could not fail to cause a general interest for the folks about the place, and would tend to heighten the standard of intelligence among the rising population, and be of the greatest interest to strangers. I was very much pleased, therefore, to find that an exhibition of this kind was open at Knaresborough, while I happened to be there, now open to the public in the town. The clergy, the neighbouring gentry, and the townsfolk sent to this exhibition such relics, antiquities, pictures, and objects of natural history as they happened to have; and the consequence was, an exhibition of the works of science and art far above the standard of what one would expect to find in a country town.

Knaresborough is a very ancient place, and we naturally, therefore, find some antiquities of the highest

interest and value. First, then, we see a very remarkable stone image (about the size of a small sugarloaf), which was one of the household gods of the Brigantes, the tribe of ancient Britons who were found in Yorkshire and its neighbourhood by Julius Cæsar, and who had their capital at Aldborough, near Knaresborough. This god is simply a rude figure of a human being, carved in hard stone, and certainly highly curious.

Close to this image was a case containing the registers of the parish. One volume is in excellent preservation, and contains, written in old English characters, a list of births, deaths, and marriages in the third year of Queen Elizabeth, 1561. Then we find the parish registry for 1640, which was the year Knaresborough Castle was besieged and knocked into the ruins it now presents, by Lilburn, one of Oliver Cromwell's generals, Dec. 20, 1644. In this register we find the names of several of the soldiers who were killed in the siege of the castle, and buried in the churchyard—thus: "One souldier under Captain Washington; item, one other souldier, under Captain Atkins." Some of the writing is exceedingly beautiful—I wonder how they made their ink in those days, for in this book it is as black as japan varnish—and is evidently the penmanship of one Abraham Rhodes, vicar of Knaresborough. It extends over several pages. The last entry being May 25, 1642, it is evident that Mr. Rhodes died about that time, for a fresh and very inferior handwriting appears, and the third entry it gives is "Buried Abraham Rhodes, vicar of Knaresborough, June 17, 1642."

This same book gives us evidence of Cromwell's interference with the Church, for one Roger Atey is

instituted and inducted July 5, 1642; and the 23rd of June, 1645, Matthew Booth is *substituted*: the meaning of this is that Booth was a Puritan. Atey had been examined by the "Committee of Tryers," and, being found wanting, had been displaced for the Puritan Booth.

In the same case is a fine copy of the "Sealed Prayer Book," dated 1662, and it contains the "Healing Service"—that is, the service used when the "king touched for the evil." The lesson is Mark xvi. 14, and at the words, "They shall lay hands on the sick and recover," the instructions in the margin are, "Here the infirm persons are presented to the king upon their knees, and the king layeth his hands upon them." Then follows the 1st chapter of St. John. At the words, "Bear witness of the light," the note is, "Here they are again presented unto the king, and the king putteth gold about their necks." Prayer-books containing this Healing Service are very rare. The last monarch who "touched for the evil" was, as Mr. Ramskill informs me, her Most Gracious Majesty Queen Anne.

There is yet another most curious book, exhibited by T. Collins, Esq., M.P. It is "The Book of Fools. 1570," showing the folly of all states, &c. (*quæ omnium mortalium narrat stultitiam*). The frontispiece is a number of fools in a boat, and is a wonderful bit of ancient engraving.

One of the greatest local curiosities was a shirt. It is the very shirt that was worn by Sir Henry Slingsby at the moment of his execution on the scaffold, Oliver Cromwell having caused this brave and great man to be beheaded on the 6th of June, 1658. It is made of exceedingly fine linen, and there is a cut in the collar of

the shirt which was made by the executioner's axe; there are also brown spots of blood about the sleeves and body. Sir Henry is buried in the parish church, and the black stone which forms his tomb was once the altar-stone of St. Robert's Chapel, now in ruins: it is called the stone of St. Robert. This relic of his ancestor has been kindly lent by Sir Charles Slingsby, who lives at Scriven Hall, close to Knaresborough. There is also another curious shirt in the exhibition, but this is a *modern* specimen; it is woven throughout in one piece, and is perfectly seamless. It has been made by one of the town-folks, W. Hempshall, a weaver; Knaresborough being famous for its weaving trade. It is certainly a most ingenious bit of work.

Another great local curiosity remains to be mentioned. Underneath a glass case are exhibited two of the leg-bones of Eugene Aram, who was tried at York in 1759, for the murder of Daniel Clark. He was convicted, and hung in chains near the town. Eugene Aram was no common murderer; he was not found out till upwards of fourteen years after the murder. He was tried by Judge Noel, who remarked that "his defence was one of the most ingenious pieces of reasoning he had ever known." Parts of the brief used on the trial are placed by the bones of this Eugene Aram, whose story is so well known through the writings of Sir E. Bulwer Lytton.

Besides the above principal local curiosities, there was a large collection of articles from the Summer Palace of Peking, lent by the Rev. J. Fawcett; antiquities, objects of natural history, and valuable paintings, which space will not allow me to mention. The natural history

collection—particularly the birds, the property of Mr. Garth and Messrs. Walton—was especially good, and, at the request of the committee, I gave, as my contribution to the exhibition, lectures on the birds, reptiles, and other examples of natural history which were placed in the cabinets. I subsequently gave another lecture on the cultivation of the Rivers of Yorkshire, especially the Nidd, that runs through Knaresborough, and gave the folks a good scolding for not putting up a salmon-ladder at the weir near the town, where the people go to on a Sunday (when the mills are stopped and the water is coming down with a torrent) to see the poor salmon knock themselves to pieces in fruitless efforts to get over. Too much praise cannot be accorded to the Rev. E. J. Ramskill, for the way in which he got together and arranged this exhibition; and, as the proceeds went towards the funds of the new church, I was pleased to hear that the efforts of the Rev. the Vicar, Mr. Ramskill, and the worthy folks who had the management of it, were pretty well rewarded.

KNARESBOROUGH CHURCH BELLS.

A FEW days after my Lecture on Fish Hatching at the Town Hall, Knaresborough, I was requested to give a second on the *curiosities* which had come under my notice during my stay at this pretty Yorkshire town. I endeavoured to find something that might possibly be new to my audience, a difficult task, as most of them were natives of the place. I believe I partially succeeded in my object, for having heard the beautiful peal of bells of the parish church so often echo and re-echo along the romantic cliffs which overhang the river Nidd, I bethought me that there *ought* to be some inscriptions on these bells, the nature of which might not be generally known. * Accordingly my friend, the Rev. J. E. Ramskill, and myself, formed ourselves into a committee of inquiry, and clambered up into the belfry to look for inscriptions; nor were we disappointed, for after a somewhat perilous exploration among the bell-wheels and ropes, the oak rafters, the dust and dirt, the bats and owls, we obtained the following inscriptions, which I now have the pleasure of subjoining:—

On the first bell :

Our voices shall in consort ring,
To honour both of God and King.

On the second bell :

Whilst thus we join in cheerful sound,
May love and loyalty abound.

On the third bell :

Peace and good neighbourhood.

On the fourth bell :

Ye ringers all, that prize your health and happiness,
Be sober, merry, wise, and you'll the same possess.

On the fifth bell :

In wedlock bands all ye who join ; with hands your hearts unite ;
So shall our tuneful tongues combine to laud the nuptial rite.

On the sixth bell :

Such wondrous power to music's given,
It elevates the soul to heaven.

On the seventh (little) bell :

If you have a judicious ear,
You'll own my voice is sweet and clear.

On the eighth (big) bell :

John Inman, Joseph Young.
The Rev. T. Collins, M.A., Vicar, 1774.
"Procul este profani."

These inscriptions are all part and parcel of the casting of the individual bells, and are found round their *upper* part, and not at the edge, as is the case with many bells. On each bell was the name of the makers, "Peake and Chapman, London, 1774." Mr. Ramskill informed me that four of these bells were recast at this date, from the bells which came out of the Trinitarian Priory, of Knaresborough, founded in 1218 by Richard Plantagenet, brother to Henry III. When the Priory was destroyed (the ruins still remain, and they are well worthy of excavation), in the reign of King Henry VIII., there were twelve bells in the

abbey. They were thus distributed:—Four to Kirby Mabeard, four to Spofforth, and four to Knaresborough. Four new bells were added in 1774, to form the charming peal which must delight the ears of every visitor to this ancient and interesting place.

A VISIT TO "THE WHITE HORSE HILL," WILTS.

I ARRIVED at my friend's hospitable mansion late in the evening in February, 1864, after a long drive over bad roads. It was so dark during the journey that I could see nothing whatever of the country, but, on arrival at the house, I heard the tinkling of a brook, a grateful sound to my ears, as I knew there were trout in it, and that we should be after their eggs on the morrow.*

On looking out of the bedroom window at early morning I saw an apparition which pleased me greatly. The house was built in a valley (I was told by my hostess that it was called "The Manger," but she did not give the reason), and right opposite the window was the far-famed "White Horse Hill," and the white horse upon it. "I must be off after you at once," said I to myself, "and see what I can find out about you for my friends, who doubtless have often seen and wondered at your gigantic proportions as they are

* My errand, in fact, was to get the eggs of these very trout that I might hatch them artificially; and when the little fish were big enough, turn them down into our noble Thames.

whisked on in the Great Western Railway express along the Vale of White Horse.* Almost everybody has read the "Scouring of the White Horse," by T. Hughes, Esq., M.P., and therefore do not need to be told that the horse is not a metal or a stone statue, but simply a rude figure of a horse cut out on the turf on the side of one of the lofty hills which forms part of the range of the Berkshire downs. The horse is situated in a most bleak and exposed position, and is not often favoured with visitors in the winter, though frequent pic-nics take place on the hill during the summer. Passing along the side of my friend's fish-pond, and along the brook, and through the copse, I soon arrived at the spring-head where the water gushes out from the chalk in a perpetual, ever-flowing, never-freezing stream, and as cold as ice itself. Emerging from the wood, I was at once on the downs; here, for the first time, I was enabled to perceive the gigantic proportions of the horse, though he was still several hundred feet above me. Forward was the word, and a few steps brought me suddenly to the brow of a precipice, which formed one side of an enormous valley, or ravine, so deep and mysterious-looking that I felt a species of awe come over me. This is, with the portion of the plain below, what they call the white horse's "manger." The south side of it is nearly smooth, and is covered with grass about a foot high. The other side is a series of frowning bluffs, such as we see in pictures of the American prairies. Both sides of the valley are terraced off in a most curious manner in neat little

* Reader, if you want to see the "White Horse," look out for him on the brow of the highest hill you can see on the left hand, just before you get to Swindon Station on the Great Western.

platforms, a few inches broad, reminding one of the tiers of seats in the ancient Roman amphitheatres. These terraces are simply formed by the sheep feeding along the side of the hill, and are known in the down county as "sheep-paths." Though their origin is well known to the local inhabitants, a stranger is greatly puzzled by their appearance.

This deep valley has a dark, ancient, mysterious gloom about it, and is, I am convinced, the theatre used by the ghosts of the ancient British and Saxon warriors whose bones are turned up by the ploughmen in the chalk hill just above. In this valley they must meet at midnight at Christmas time; and while the great King Alfred, seated by the White Horse, overlooks them, as he did hundreds of years since—

The chief beholds their chariots from afar,
Their shining arms and coursers trained to war;
Their lances fixed in earth, their steeds around,
Free from the harness, graze the flow'ry ground;
Their love of horses which they had alive,
And care of chariots after death survive.

But what can that object be moving far, far away at the bottom? I cannot see it now. I certainly saw something move among the long grass; ah! there it is again—a hare—look, there she goes at full speed up the hill-side. She stops and listens; I blow my whistle; she is off again. Ah! poor puss, you may well keep yourself in training. You have probably escaped but yesterday from the greyhounds at Ashdown Park, and you had better be off at once, or my friend's noble harriers will be after you to-morrow. So I shouted "currant jelly" as loud as I could, and poor puss put on the steam, and was soon out of sight.

The ascent becomes steeper; but steps cut in the turf assist one a little, though it is like the going up the roof of a house. What a curious-looking gutter this is on the right hand, and how clean it is kept! I wonder what it is. I go further, and perceive that the gutter widens out into a broad ditch, about six yards across, and two feet deep, cut in the turf. I walk along it; but where can the white horse be? I go higher up the hill, and at once perceive that these apparent ditches form the outline of the white horse himself.

It is indeed a most gigantic beast. When near him he is not the least like a horse, but by walking up the white path which forms the back-bone, one arrives at the head. On a little consideration its form can be made out; the two ears are triangular places cut out of the turf like a big flower-bed; the main body of the head is nearly, if not quite as large as one of the Charing-cross fountains, and in the centre is a round patch of white chalk, which forms the eye. The lower jaw is composed of two pathways cut in the turf, so that the white horse's mouth is represented as being open, as though pulling hard at the bit. In order to give some idea of the size of this head, I now give its measurements as I stepped it out. The eye is just four feet across; the hind ear is fifteen yards in length; from the top of the head to the lower jaw there are twenty yards; from the lower jaw to the base of the hind ear eighteen yards. I then proceeded to step out other portions of the horse, and found that the length of the lower fore-leg is twenty-four yards, and of the hind-leg forty-three yards. The tail of the horse is two yards across, and forty yards long; the lower part of it, in consequence of

the drainage of the wet, reminding one much of real hair; the entire length of the body of the horse along the line from the lower jaw to the tip of the tail is *one hundred and thirty yards*; add to this the forty yards for the tail, and we have the total length of the white horse *one hundred and seventy yards*, as near as possible. Reader! mark the space out with sticks on your field, and you will see what a gigantic fellow this white horse is. The whole animal is said to include a space of about two acres, but I have not time to verify this. If Londoners wish to realize his size, let me tell them that the line from the lower jaw to the end of the tail is *about* the same as the length of the pavement on the top side of the square of Charing Cross, opposite the National Gallery.

For many centuries has the White Horse been keeping watch over the country below, and has been admired and wondered at by generation after generation of worthy Berkshire men and women; but it is occasionally "scoured," that is, the pathways are cleaned out from the grass which has grown up upon them, and clean fresh chalk added to make the horse clean and bright, for on a clear day he can be seen sixteen miles off; the last scouring being that described by Thomas Hughes, Esq., M.P., in his admirable work the "Scouring of the White Horse." It is at this time that various rustic games are played, and I listened to a long disquisition on the art of playing "back-swording," &c. I learnt all the mysteries of back-swording from Thomas Butler, the old man, who went out to "Idle Tump," an old camp close by, to gather moss for me to pack up my trout eggs with. Thomas informed me that he has both

"a-seen it and a-done it many a time on the hill, and that he had generally got the best on it."

Of the origin of the White Horse nothing certain and positive is known; it is, without question, of very great antiquity. The following is, I believe, about the most authentic account:—"In the reign of Ethelred I., the brother and immediate predecessor of Alfred, the Danes invaded Berkshire, and possessed themselves of Reading. There they were attacked by the West Saxons; in the first engagement the Danes were defeated, but in the second they repulsed their assailants. Four days afterwards, at *Æscesdum*, *i. e.*, Ash Tree Hill, a more important battle was fought, and in which the Danes were defeated with great slaughter. The white horse is probably a monument of this victory."

It is always with regret and a sigh that I consult books on matters of this kind; how much better is it to gain, first-hand, the local traditions and stories which are sure to abound in the neighbourhood. I was therefore most pleased, in the course of the morning, to meet in the village a poor old woman with a bundle of sticks on her back—for if there is one thing more than another which is a real treat to me it is to have a chat with a venerable old man or woman, rich or poor, a Peer or a Pauper. "Good morning, Mrs. —; good luck with the sticks, I trust."

"Ah! sir, times is 'ard, sir; and the farmers terrible cruel, sir; they won't let a poor auld doman (Berkshire for woman) pick up a few bits of sticks just to bile my kettle and cook me a bit of victuals like, sir; and I am a poor old body—seventy-three come this next lambing time; but, thank God, I be pretty hearty for my years."

"Did you ever go up to the white horse, granny?" said I.

"I ain't a-been up there for this five-and-sixty year, sir; not since I was a young girl, and used to dance along wi' the chaps a-scouring time. Fine goings on there was then, sir, I can assure you; there ain't times like them now-a-days."

"But who made the white horse, granny?"

"Well, I have 'eard tell in the village, as King Alfred the Great cut en out a time ago on the downs with his sword, when he had a fight again some foreigners; but I never minds the name on 'em. There's been a deal of battles up by the white horse, sir, and there's a terrible sight of bones about; old pots, great knives, bits of money, and all manners, as they ploughs up in the turmut (turnip) fields—they is the things as was left when there was war up on the hill. I recollects, sir, my father a-taking me, when I was a little girl, up on the hill when war was there, and the soldiers was beautiful, and such 'andsome young men, sir; but I don't mind much on it now. It was only t'other day as there was war again up the hill, and the guns was a-going off all day, and they telled me in the village as how they was shooting deserters. Besides which I s'pose you see the Dragon's Hill, sir. That's wherë a dragon was killed, sir, a long time ago; his blood ran out on the hill, and 'no grass would grow on it afterwards. I don't know what to make on it, sir; but anyhow there ain't a-been no grass on the hill not in my time—but I am a poor old body, sir, and my memory ain't so good as it used to be. Thank ye, sir! Now I'll go and buy myself a bit of tea and sugar, sir, and bless you for your kindness to

a poor old doman. I am well one day and bad the next. I ebbs and I flows, sir, that I does; I ebbs and I flows."

I have taken some little trouble to find out what "the deal of war" was that my ancient friend recollected as going on on White Horse Hill. The first occasion, when she was taken up to see the "beautiful soldiers," must have been the assembly of the Volunteers in 1803, when Bonaparte was expected to land in England; the second "war" must have been the encampment of the Berkshire Volunteers, which took place a short time since, when rifle practice was incessantly going on in "the manger" under the white horse. So, after all, there is some foundation for her "terrible sight of battles" having taken place on White Horse Hill.

The battle with the Danes, I think, must have been fought about A.D. 890 (I write under correction), and I fancy that Ashdown Park, the seat of the Earl of Craven, where the well-known coursing meetings are held, must have taken its name from the site of this ancient victory.

How times are changed! Formerly the Danes were enemies—the invaders of our soil—and I fear when conquered they were cruelly treated by the victors; *now*, a fair Danish lady sets her foot upon this soil; the whole of England rises as one man to welcome her arrival to our shores; what a *whole army* of Danes could not do, namely, conquer England years ago, one fair daughter of their country has done in 1863. England's brave sons would *never* bow to an invading host, but they will with one accord render due submission and homage to the beauteous Royal Princess,

the wife of her Majesty's eldest son, and the mother of kings who will rule this land when *we* are all laid low in the dust. Who, then, can help looking at this Giant White Horse, unaltered by time, by wind, by frost, or by storm, rejoicing in his strength and semi-immortality on the bleak Berkshire downs, and will not think of the present and the past?

Far, far away in the valley below I see *another* White Horse speeding his way with lightning wings; this is the steam horse of the present day—the Great Western locomotive, “The Duke of Wellington,” vomiting clouds of steam, and rushing comet-like through space with the morning up-express to London.

This is science, this is progress; this is the work of the present generation. Yet *the* White Horse notices it not; as he was years ago, so is he now, grand, mysterious, and awful in his hoar antiquity and silent watchings for time and events to come.

THE WILD DUCKS' POND.

Roma Tibur amem ventosus.
Tibure Roman.*

THUS wrote that most wonderful of men, Horace. He was, like many eminent literary men of the modern period, a Cockney—a Roman Cockney; he was fond of pleasant, learned, and witty society, of good dinners, and of the Falerian of the comet year, of course. Yet human nature is always human nature, and the fresh air and change of the country is always grateful to the brain-worker, whether he lived a thousand years ago in Rome, or this very week in London. Even Horace, like some of ourselves sometimes, became hipped, out of sorts, and miserably melancholy. He tells us so as plain as words can speak:—

“To Celsus, muse, my warmest wishes bear;
And if he kindly ask you how I fare,
Say, though I threaten many a fair design,
Nor happiness, nor wisdom yet are mine—

Inconstant as the wind, I various rove;
At Tibur, Rome; at Rome, I Tibur love.

Reading I hate, and with unwilling ear
 The voice of Comfort or of Health I hear;
 Friends and physicians I with pain endure,
 Who strive this languor of my soul to cure.
 Whate'er may hurt me, I with joy pursue;
 Whate'er may do me good, with horror view:
 Inconstant as the wind, I various rove;
 At Tŭbur, Rome; at Rome, I Tibur love."

EPISTOLÆ, lib. I. ix.

Having doubtless posted the above epistle to his friend, of course an invitation came as follows:—

DEAR HORACE,

Why don't you come down here at once from Saturday to Monday? shall be glad to see you, and will send the "quadriga" to meet you. Did you see what Sallust says in the papers this morning? "The poor Britons—there *is* some good in them after all—they *produce an oyster*." I have just got a barrel given me. Come and try some of the products of this barbaric island; also a turbot finer than that which you mention in your Satires. Come at once.

Yours ever,

CELSUS ALBINOVANUS.

Horace could not go to his friend's house by railway, for the same reason that Guy Fawkes (in the song) could not obtain certain articles he wanted for his firework display—namely, "because they weren't inwented, with a tow, row, row," &c. We, however, of the present day are much more lucky, and we fly with the speed of an arrow to the domains of our cōuntry friends and back again in almost less than no time. Folks talk about hot and cold water baths, vapour baths, hot-air baths, Turkish baths, and other kinds of baths innumerable; but of all health-giving, invigorating baths, give me the good, pure, *fresh-air* bath, and this is how to take it:—Get an order from the authorities, and ride on an engine of the Great Western express to Didcot and

back, when it is blowing half a gale of wind, varied by a shower or two; wrap up warm, and never mind the cold; and you will imbibe such a stock of fresh air as no Turkish bath ever can or ever will give you. If a place on the engine is not to be had, open the window of the carriage, and take your fresh-air bath as it pours thousands of cubic feet of oxygen and ozone into the "gas-pipe" of your lungs.

"'Stone, 'Stone;" cried the porter, as the train ran into Aldermaston Station, having left Reading some ten minutes behind us. My hospitable host and friend, Mr. Higford Burr, was there to welcome me to his hospitable mansion, Aldermaston Park, and away we went, talking of all sorts of things—scientific, literary, and sporting.

"I want you to examine my decoy," said he; "it is swarming with wild ducks, and I shall soon begin to shoot some of them."

Accordingly, on the following afternoon—a beautiful, bright, shining afternoon in December—off we started to visit the ducks' home. Across the beautiful and ancient park, amid the

"Oaks, the brave old oaks,"

planted, probably, about Henry VIII.'s time, and the head-quarters, in summer-time, of fairies and elves, but who, delicate creatures as they are, I fancy hibernate in the old trees in the winter, and don't come out much before the warm nights in June, when there are plenty of them in the park at Aldermaston. Amid the ferns, where the deer jumps suddenly up, stares round for an instant, and is off with

the wings of the wind. Close to the herd of little, rough-coated Scotch cattle, who stare at us with their big eyes. Pheasants get up with a startling whirr, fly comparatively slowly and amazingly near us. Under the mistletoe boughs growing *on thorns*: mistletoe does *not* grow on oaks, and the Druids preserved that which *did* grow on oaks because (at least so says the antiquary of our party) it was a rarity. The call for and the intended entrapment of the young Lady of the party to examine a most curious plant which, by a strange coincidence, happens to grow just *under the mistletoe* high up in the tree. The discovery by the Lady aforesaid of the conceit, and her happy escape. The big dog and the little rabbit—10 to 1 on little White-tail; in he pops into his burrow, and the big dog is brought up by a furze bush and looks silly—

And we laughed, Ah-ah !
And we chaffed, Ah-ah !

We soon came near the decoy. "Quiet! hush all of you!" said the Squire, "or you will frighten the ducks. Catch the dogs, and lead them." And we all became silent and submissive, and crept along like a row of Polytechnic ghosts. A few steps, and we see the pond. The utmost quiet is now necessary. A—tisha! a—tisha! "Who is that sneezing?" cries the Squire; "I wish you would be quiet." Everybody looks at their neighbour to see if he or she sneezed, *and looks it was not I, it was you*; and the wag of the party points to the big, innocent-faced dog, as much as to say "That's the culprit that sneezed." A titter from the party, and somebody begins to talk. The foremost file turns

round, and threatens with a big walking-stick. The word "March!" is passed along, and away we go, twining like a long snake round a corner into a dry ditch. Along the ditch, which seems to have been *purposely* strewed with quantities of the most fragile sticks, that break under the foot like crackers on the 5th of November. And we arrive at last at the look-out house. The ladies get up the bank, and look through the peep-holes; the gentlemen crawl up and thrust up their heads in a long row, like masks at a pantomine.

By Jove! what a sight!—everything is as still as the inside of an exhausted air-pump. Before us a sheet of water as calm as a looking-glass, and on its surface hundreds of apparent tufts of grass, also silent and motionless. Presently a tuft of grass begins to move, other tufts follow it, and away go a long string of wild ducks and teal, paddling away in a row to some well-known hiding-place. These cunning creatures are on their guard; they know we are on the land as well as we know they are on the water, and they perform numerous evolutions, like Volunteers at a field day, and then "form squares" and are quiet again.

At last the old wild duck, the sentry, is quite satisfied that there are strangers about. He sounds the loud trumpet of alarm—"Quack, quack, q-u-e-e-r-k!" The army of ducks to a bird know the signal; in an instant a thick cloud of birds rises from the water, now covered with moving ripples and no longer motionless. Away they go like a swarm of bees; they are off for the night, far, far away. No, they are not; the leading duck (like the trumpeter of a cavalry regiment) sounds

“Right wheel,” and then “Forward.” Back they come again over our heads, like a flock of gigantic desert locusts. The noise of a thousand wings strikes our ears—nature’s wondrous music, to be imitated neither by human voice nor human instrument. They see us; “Sound a gallop!” says the Commanding Officer duck. No bullet would catch them now in a fair race. “Skirmishers out!” sounds the trumpeter, and they break up instantly into companies of twos and threes; these at once assume the triangle form, and go off far, far away into the deep-blue sky. Less, less, less every minute they become, till at last they vanish altogether—a famous study of practical perspective, which must be highly interesting to the sportsman who has been out half the night in the cold, and has missed his shot after all in the dawn of the morning. Look out, here is another lot of birds coming. Again a different sound of wings, like a minor key to the major key of the wild ducks’ wings. Teal, are they? very well, my friends, fly your best now; but recollect cayenne pepper and a sliced lemon await under those tender breasts of yours before Christmas-day; so you had better make the best of your time now.

Splash, splash; the most courageous of the birds are coming back to the far end of the pond. Mark how they alight; they open their web feet, come down, as the Yankees say, “slantindicular,” and break their fall into the water by pushing the water up before them in a long continuous splash. The “Manual of Deportment” gives full instructions to young ladies, who need the same, as to “how to enter a drawing-room gracefully.” Doubtless, the old drake teaches the young

lady ducks how to enter a pond with grace and elegance, and we see the result of her training being exemplified before us.

But it is near four o'clock : Sol, the red-faced, has just begun to dip over the Berkshire hills ; the Ladies want their tea, and the ducks, doubtless, their supper. Our worthy host offers to lionise us round the pond, and show us where the ducks take their morning airings, and how he manages to shoot them when they are getting too thick. He also shows us an elaborate wire trap, that looks like a huge aviary with an ingenious contrivance to pull the door from the hiding-house in the dry ditch, *when* the ducks have gone in it ; but though the trap has been there *many years with the door wide open*, and food inside for the ducks, they have never *yet* gone in, and it would seem that they never will go in. They are Berkshire ducks, with plenty of brains under their green and gold feathered winter caps, and not like their cousins the Dutch ducks, who seem to delight in being inveigled into danger and having their necks stretched by an inglorious Lowlander.

"Come along, come along there!" cries the Squire, from afar off. We form a V, like the wild ducks, to see if we walk easier this way than in single file ; and are soon warming our hands round the cheerful fire, while the great metal griffins, the guardians of the logwood blaze, seem to welcome us after our delightful walk through this charming old Berkshire park.

A SHOT AT THE WILD DUCKS.

"It is splendid weather for the wild ducks to-night. I only hope the wind may not get up before morning. It is very remarkable, but on a windy morning the ducks never come in any number to my pond," said the Squire, as he looked out of the hall-door of the hospitable mansion, a few days after our visit to the decoy. "I shall be sure to call you all very early, so mind you unbutton your eyes pretty quick:" so we lighted our candles, and away we went up stairs. Some time before five o'clock next morning, the alarm went off with a ring, ring, ring. I looked for a boot to throw at it, which effort woke me at once; and, jumping up, I looked out of the window. It was as dark as pitch; no wind and no moon. So all was favourable. On going downstairs I found the Squire crouched over a log of wood, which was burning splendidly. He was most triumphant—his plan for banking up the fire over night having turned out to be perfectly successful: he was busily engaged boiling a caldron of milk for our breakfast.

"Quite right, my friend," said I; "I recollect Sir

Benjamin Brodie saying to me when first beginning the noble science of practical surgery, 'Whatever you do, my lad, never go out without breakfast of *some* sort; and the best thing is milk.' And so, too, one finds the old soldier generally getting "something to lean his back against all day" before he goes out in the morning.

Then our party came down one by one, the guns were produced from their cases, the leather pouches containing the cartridges for the breech-loaders taken down, and we were ready to start. A nice lot we looked, just like a gang of conspirators about to enact some horrible midnight tragedy, wrapped up, as we all were, in heterogeneous costumes, to face the cold air. The ponderous bolt of the hall-door shot back with a loud click, and we were in the open air.

"What is that?" said my friend, the Rev. C. Wolley, of Eton College, who formed one of our party. "Tu whit—tu whoo; tu whit—tu whoo. I know the cry well; it is an owl. Listen."

"It is an owl," said the Squire; "I don't allow the keepers to shoot them; they do more good than harm, and that fellow lives in an old tree somewhere up by the 'corner oak.' But, Buckland, you made a mistake about my oaks; they are very much older than Henry VIII.; it is much more likely they date from about the time of the Conquest—at least, my predecessor, Mr. Congreve, who was very learned about Oaks, was of that opinion."

"By Jove, how terribly dark it is!" I exclaimed, as I ran bang against the iron park-railings. "Where the deuce is the gate?"

"Here it is," said the Squire. "Now, I'll light a cigar and lead the way. Hark! there is the owl again."

"Oh, no," Mr. Wolley said, "it is——" We all listened. "Cock-a-doodle-do."

"It's only old Chanticleer in the farm-yard," said the Squire; "but we are out after ducks, not owls—so come along."

We formed single file, and away we went across the park. Here the shadow of the trees and the deep gloom of the heather made the darkness doubly dark; and unless we followed the cigar light we invariably came to grief in furze, fern brakes, or ditches.

"What a pace you are going, Squire!" said I. "I don't feel half so cold as I did at starting."

"Never mind," said he, "we must get along."

"This fun reminds me," said I, "of the midnight expedition of the Grecian princes, Diomed and Ulysses; and nice fellows they were for princes, to go out at the middle of the night *horse-stealing*, and drive off the four greys of Rhesus with the string of an unbent bow,* for he left the whip in the chariot, in the middle of the night. Do you not recollect what Diomed said when Ulysses was going ahead too fast?

But let us haste, night rolls the hours away,
The red'ning orient shows the coming day,
The stars shine fainter on th' ethereal plains,
And of Night's empire but a third remains."

So off we went down the long walk. Where is the turning? Oh! I can feel the rail round the young oak—it is too dark to see it; and now I feel gravel under my

* Ulysses now the snowy steeds detains,
And leads them fastened by the silver reins;
These, with his bow unbent, he lashed along;
The scourge forgot, on Rhesus' chariot hung.

feet. All right; right wheel, go ahead. Along through the dark furze brake, and down the hill. Ah! there's the pond, and no light yet; we are in plenty of time.

"Mind the plank over the stream," said the Squire, "I will lead the way. Look out, here is another terrible plank." Splash! "Who's that gone in?"

"All right," said a voice behind. "Confound your planks, Squire; I wish you would make them wider; but I have only one foot wet." Flop, flop, flop, hi-r-r-r.

"*There* now, you see what you have done!" said the Squire; "a lot of ducks have heard us, and are gone from the pond. Now silence, if you please, gentlemen; and put out your smoke. Here, Buckland, you get into the dry ditch with Mr. Wolley and Mr. D——; I will stay here, and H—— will go to the head of the big pond."

So we crawled down into the ditch, and coiled ourselves up in the dead leaves and ferns like so many hedgehogs. The darkness was most oppressive, the silence almost awful. At last, in the far distance, a loud half-cry, half-sound, something like a railway engine blowing her steam off.

"Good gracious! what on earth is that?"

"It is the poachers going home," whispered Mr. Wolley.

"All right," I said; "it is no poachers, it is the cow-boys and the labouring lads going out to work; they always signal to each other in this manner before sunrise, but it is a curious custom."

Silence again. I will have a look over the pond with my race-glasses. They tell me they are capital for night-work. No, there is nothing there; the water is as still as a looking-glass. "Hiss, hiss, hiss! errh-errh!"

"Hark at Master Screech-owl," said my companion in the ditch; "he knows we are after no good. He is somewhere up the pine-trees close behind us."

"What on earth is that new and curious noise? I never heard that before," said I. Mr. Wolley whispered in my ear these words:—

Τοῖσι δὲ δέξιδν ἦκεν ἐρωδιὸν ἐγγὺς ὁδοῖο
Παλλὰς Ἀθηναίη· τοὶ δ' οὐκ ἴδον ὀφθαλμοῖσι
Νύκτα δι' ὀφρυαίην, ἀλλὰ κλάγξαντος ἤκουσαν.*

A heron, is it? What a fellow that Homer is!—what a splendid description of what we have just heard! I wonder if Homer ever went wild-duck shooting. Anyhow, it is a good omen.

A cigar-light is struck in the distance. "What's that?" "Oh, it's the Squire, just to remind us of his position, and a hint as well to keep quiet."

"What's the time?"

"Fifteen minutes to seven," said I; "you see, it's getting a little light."

How very gradually the light comes on. What a lovely scene! The folks talk of scenes at theatres—what can beat this, even though our opera box is a damp ditch?

"The ducks will be here in five minutes," said Mr. Wolley, "so look out."

The words were hardly spoken, when a rustling as of ladies' silk dresses came directly over our heads.

* Just then in sign she favoured their intent,
A long-winged heron great Minerva sent;
This, though surrounding shades obscured their view,
By the shrill clang and whistling wings they knew.

ILIAD, lib. x., 274-6.

Splash, splash in the further pond. That's the first lot anyhow. Three dark forms suddenly come over the trees on the right, and splash down into our pond they go.

"Can you see them, Buckland, with the glasses?"

"Yes, there they are, just in front of the weeds!"

Bang, bang! from the other end of the pond.

"The ball is opened then," said Mr. D——, "then I begin also—here goes!"—bang, bang!

"All right, he is a croaker," said I; "I can see him through the glasses kicking and twisting about."

There come the ducks again—eight this time. Oh, hang it! they are gone to the lower pond—bang! They go away again like the wind—that is to say, some of them—for the Squire has given them toke and a warm welcome.

"Look out! over your head! quick! Here he comes—a single fellow from the last lot"—bang! That's a capital shot.

Aerâ vitam sub nube relinquens

Sternitur, exanimisque tremens procumbit humi—duck

*Et resonant penitus concusso in viscere glandes.**

He falls with a heavy thud right into our ditch. I grab him in an instant. Poor beast, how he bleeds! wring his neck and put him out of his misery.

Oh, bother! how light it's getting. "Who can that be blowing that horn?"

"Oh, that's the postman; it's past seven. Quick! the ducks will begin to come again directly."

* So leaving his life in the clouds high up,
He fell to the ground with a mighty wop;
And the acorns rattled within his crop.

A rush over our heads like the first gust of a coming high wind. Some eight or ten more birds come over. Up go the guns—too high; it's no use, they will go to the lower pond. Immediately, bang, bang, bang!—a regular *feu de joie*, at the lower pond. But who the deuce can the third gun be? for only the Squire and his son are there. Never mind, look out again! Now it's our turn. Teal, for a thousand! by their flight. In our pond this time. Bang, bang, bang! Ah, capital! only one of the lot gone, and he a pensioner. Never mind; the watchers on the hill-top will mark him, and we shall get him as we go home. There they are again—quick! Down come four widgeon on the pond. They just have time to touch the water with their feet, when—bang! Too late, my friends, you should have seen us before; two of your party are left behind. Ah! you may well fly your fastest; you have had a narrow escape. Spatter, spatter! hot coals in the ashes. Never mind; it's only the shot falling into the water from the Squire's last shot. Thank goodness, there is no ice, or the shot would bound with a ricochet along, and would not even know where to stop. The birds have not done coming yet, I declare; down with you, out of sight; here comes a famous lot, singing “ping, ping, ping” with their wings. Stupid brutes! cannot you see what has been going on since you have been away? do not you see your relations and friends all over the pond dead and dying? No, you won't be told; then take that. He is down! yes! no! yes! Mark the place. Crack, crack, goes the strange gun. Down fall a couple. The poor things are bewildered. Here they come again over us. No; it's no use: away they twist and turn, like an eel coming down

stream gets out of the way of a post. But they have their revenge. They have sent out their sentry; look at him high in the air, trumpeting querk, querk; round and round he goes, to warn his friends who are coming home "with the milk in the morning" that their home has been disturbed, and that enemies are ensconced behind every bush.

A long quiet. No more ducks appear. "It's pretty nearly all over now," sings out the Squire, for the first time breaking the silence; "you can come out of the ditch now, I think."

"Splendid fun, Squire," we exclaim, "though only twenty minutes of it; and look at the ducks! But who was the third gun on your pond?"

"Ah!" said the Squire, "it's the head keeper: I told him last night to come up, and I gave him what I thought was a place just for a chance shot, but you see he has had more shots than any of the others. I will sound for him."

The Squire then blew upon a little horn, which sounded exactly like those used on Belgian and French railways, and which can be heard an immense distance—a most capital instrument for signals in the field. This was the signal for everybody to stop shooting, come out of their hiding-places, and collect forces. The underkeepers appear as if from the ground, and one of them unpadlocks a little boat, and paddles out to pick up the ducks. What a sight was there in the early morning! Here a widgeon floating on his back, his head sunk deep in the water, his feet stretched out like sails to a boat; there a duck floating, as in life, on her breast, with her head and neck in the water, as if feeding among the

weeds; far away a teal—a mass of feathers, evidently shot from behind, and much denuded of its plumage. Somebody has shot the king of the pond. Look at him; the poor old fellow is floating on his side, with one wing thrown open, as a man opens his coat lappel when about to say a good thing after dinner; his glossy, emerald-green head reflects the bright rays of the morning sun, which his acute and wary eye—now, alas! closed—shall never see again. His full, plump breast is covered with feathers and down, stratified and arranged, till they form a water pillow soft as cotton wool, yet as impenetrable to water as a sheet of macintosh. His beautiful orange-coloured feet, but so lately paddling about the oozy banks and mud of the fair river Kennett, are now stiff and cramped in death! You are, indeed, a splendid fellow, and it seems almost cruel to kill you.

“Here, hic in, good dog! fetch him out.”

The faithful retriever—deaf though he be—sees the king of the duck-pond; he goes a little way into the water, whines “How cold it is!” and at last, summoning up courage, plunges in—like a noble-hearted dog as he is—swims for the bird, takes him in his mouth, with a delicate touch such as a courtier might envy when handing her glove to the fair lady of his choice, and swims back towards the bank, looking with his great beautiful eyes for the expected pat and “Good dog!” which his kindhearted master is sure to give him. Here comes the keeper from going round the pond, with the dog and the boat. Well done! what a fine lot of birds! Put them down, and let us examine them. Where are my pocket-scales? Drake, 3 lb. 1 oz.; drake, 3 lb., &c., &c.; drake, 2 lb. 15 oz. (a good bird), 2½ lb., &c.;

widgeon, 1 lb. 14 oz.; teal, $\frac{3}{4}$ lb., &c., &c.—not a bad lot for about twenty minutes' shooting. Halloa! what makes this great mallard rattle so?—he has been eating something precious hard. I will soon see what it is. Here is my dissecting-knife. Acorns, by Jove! and what a lot of them—a good large handful. We will plant some in commemoration of this fellow's memory. I wonder where he got them. He has found out some snug feeding-ground, and selfishly kept the news to himself, for none of the others have acorns in their pouches. A splash, a rush in the weeds in the pond close by where the dissection is going on; the dogs stare and whine, and prepare to jump in. Everybody turns round.

“What is it?”

“A rat,” says one.

“A moorhen,” says another.

“Shoot, whatever it is,” says the Squire.

Bang goes Mr. Wolley's gun in an instant; and as fine a *jack* as ever I saw springs some two feet out of the water. He flounders about, and as he is just escaping, a second shot settles him. The dogs jump in, but will not mouth him; so the Squire, who has wading boots on, goes in and catches him by the eyes.

“Well, I am glad,” said he, “we have bagged this rascal; this accounts for the disappearance of my young ducks from the pond. He is as plump as a Christmas pig, and you may depend upon it he has eaten his own weight in young ducks in the course of his life, and I am very pleased to get rid of him out of the pond.”

“Give him to me,” said I; “he is another subject for the scalpel, and I should like to see where the shots have

struck. See here, his head has five or six shot-marks upon it; where are the shots?"

I examine most carefully, but they have not penetrated, they have not gone into the bone of the head. The fish, then, must have been stunned by the concussion of the water more than by the actual blow of the shot. This is very curious, for I did not know that water could stop shot like this.

"But how about breakfast; are not you hungry, gentlemen? Let us be off, it's nearly nine o'clock," said the Squire.

We pack up our warm wraps, and give them to the under keepers; beating the ground as we go home, bagging a hare and a squirrel, which latter the Squire declares is capital eating, and which he shoots on purpose for me to try and report upon. We soon arrive home, and during breakfast discuss the events of the morning, and particularly how it was that the jack was killed without the shots having entered his head. This curious fact led to a long correspondence in "The Field," in the course of which many remarkable facts were elicited. I refer my reader to the Appendix.

JACK-FISHING ON THE AVON.

WE came down the incline into Salisbury by the express train at a fearful pace; round the curves and over the embankment we flew with a speed that took one's breath away, and dashed into the station like a comet.

A rush for a fly (for it was a fair day), and off we went to the Star Hotel, Fordingbridge, where we were cordially welcomed by the civil and obliging landlord and his wife, Mr. and Mrs. Bill, and our friend Mr. Cholmondeley Pennell, who preceded us in order to try experiments on the Hampshire jack, which were said to abound in the deep waters of the Avon. "What sport?" said I. "I have had four days' fishing and have caught thirty jack out of thirty-six runs (the largest fish running between 6 lb. and 9 lb.), with a spinning bait. The water, however, is very bright, and the weeds very high. I have got an order for a splendid place to-morrow, and hope we shall have luck."

Accordingly, on the following morning we got ready for the start. Great cans with the bait, the rods, lun-

cheon, tackle, &c., were all placed in the landlord's four-wheeler, and in we jumped. "I will drive," said Pennell; "all right behind? let go." The ostler let go, but not an inch would our noble steed proceed; she put back her ears, shook her head, and made an attempt to kick, foiled, however, by the kicking-strap. The ostler then tried persuasion, but it was no use—the mare reared back, and made another false start. The coachman then touched her with the whip and we were off at last, first a walk and then a trot and then a gallop. We had not gone ten yards when the mare all of a sudden turned right round in the shafts; she first wheeled to the right and then suddenly to the left, the four-wheeler going in the opposite direction. She then began to kick, and backed right into the railing. Out went the landlord and ostler from behind, the coachman and myself from in front. I was nearest the railing, and took a Leotard-like leap at it, mercifully not falling, for in an instant down came the mare on her side with a crash, breaking both shafts short off, and kicking and plunging furiously. She did not, however, touch me, though I was between her and the railing; but it was a very narrow escape. We disentangled the mare, who was not much hurt; picked up the live bait, which were flopping about in the dusty road; and walked back to the hotel as dignified as circumstances would permit. Another horse was then put into a borrowed dog-cart, and we had just got to the place of the former accident, when the shafts began to elevate their noses in a most unpleasant manner; the old grey seemed to be walking on his toes, being almost lifted off his legs.

"Out with you, gentlemen," said the landlord, "or we

shall all be over again ;” so we all jumped off like artillery-men from a gun-carriage.

“Is this what you call going out jack-fishing, Pennell?” said I. “I don’t see much chance to-day. We have been just two hours getting ten yards from the door, the live bait is dead bait, and one of the rods is smashed.”

“Never mind,” said P., “let’s go into the garden and catch more bait.”

So we got into the landlord’s punt and began to fish for roach and gudgeon. I discovered at the bottom of the boat a huge wooden mallet with a broken handle, a terrible-looking instrument.

“What is this instrument for ?” said I.

“Oh, that’s what we use to knock the jack on the head,” said Pennell, “they are such tremendous big jack about here.”

Hearing this I thought no more of the accident, and away we went once more, this time getting a fair start.

We soon arrived at the mill, where we found the keeper awaiting us, who told us his master had sent him down to attend upon us. He seemed rather surprised at our small baits, “For,” said he, “in the winter we generally use very large tackle, and fish with a roach from half to three-quarters of a pound in weight ; but I think Mr. Pennell’s tackle very good to spin over the weeds, which are terrible thick about.”

The keeper was right ; the river was one mass of dense solid forests of weeds, which waved about in the rapid stream like great sea snakes. Between them, however, were here and there streets and lanes of beautiful deep water, looking almost ink colour on account of its depth

and the darkness of the weeds, the water itself, however, being as clear as crystal.

"Any big jack, about here, keeper?" said I.

"I will show you one, sir, at once, and you shall judge for yourself."

We proceeded to a little house built over a stream, which was railed in. "Look there, sir," said the keeper. "Go quietly." I looked over, and there lay a giant jack, sunning himself, and basking, like a great dog, in the shallows. I crept quietly up, and looked over. He was indeed a monster. He lay as still as a log of wood, just moving his gill-flaps, and looking straight at me with his savage-looking eyes, which, by the way, he did not turn about like a roach or a gold fish. He supported his great body on his ventral fins, and gently feathered the water with his pectoral and caudal fins. I moved the water with the end of my rod; in an instant he was off like an arrow, stirring up a cloud of mud which gradually spread itself all over the fish stew.

"By Jove! keeper," said I, "he is a fine fellow."

"Well, sir, he has been in here some time now; he was between 23 and 24 lbs. when he was put in, and I do not think he has wasted much. He feeds well upon large bait and little jack, and has killed lots of the miller's young ducks. If they once get into the stew, the big jack will have them, and they will never quack again. There is a fellow jack to him down the river a little way, and we had him in the net once, but he went through it like a cobweb. They are very dainty, artful fellows, these big jack, and require a deal of catching; and the best bait for them

would be another jack about three pounds weight, if you gentlemen could manage to spin with him. There are bigger jack than him though in the river, for last winter they found a jack among the weeds that weighed thirty-two pounds. He had a number of hooks in him broken short off. There was nobody that took notice of him, so they buried him in a dunghill." Hearing this I nearly fainted in Pennell's arms: the idea of *burying* a jack thirty-two pounds in weight, and wasting such a magnificent specimen!

"Show me his grave instantly," said I. "Where is the dunghill? I will soon have him up."

"It's no good, sir. He is all to bits by this time; besides which, sir, you could never have touched him, the smell was terrible."

"Smell," said I. "I know how to tackle a smell—Cundy's fluid is the stuff. Besides, what do I care for smell, when there is a chance of a good preparation?"

"I don't want to excite you, sir," said the keeper; "but we caught once in the net three jack that weighed fifty-three pounds; the keeper at ——, some six miles below, has got a jack in a pond that's waiting till he is wanted for the house, close on twenty-three pounds, and he found a dead one last winter that was pretty nearly as big as that found in Mr. Bill's water."

"You have a good many jack in this stew sometimes, keeper?"

"Yes, we have, sir, and I will tell you a curious thing: One day I put in a jack that had a gorge-hook in him, for the gimp was just sticking out of his mouth. I did not take him again for six months, and when I came to look at him I could not find the hook at all.

As I was cleaning him, something hard struck against the edge of the knife, and I found it was the gorge-hook that had worked itself right through him, and was nearly coming out. It was quite loose in the intestine, and did not seem to have injured the fish, for he was in good condition, and I know he fed while he was in the pond. I think the jack eat the eels in the summer time (there are plenty of them about); and as good a bait as you can use for large jack is the tail of an eel, but it won't spin very well by itself; you must cut about two inches of the head off, and sew it on to the tail part, and then it will spin beautifully, and you can fish with it all day without its tearing much. But hark! your friend, Mr. Pennell, is crying for the gaff. We must be off, sir. Run! it's a good fish, from the bend of the rod."

Off we both started as hard as we could go—the keeper going over a board bridge, and I myself floundering, head-over-ears, bang into the muddy water and rushes of one of the water "carriers," and getting my first wetting for the season.

"It's terribly hot!" said Pennell; "how I envy those cows in the water! I have been a long way up-stream, and this is what I have got. I saw a beautiful quiet dyke, about five yards wide, and at the first cast I was delighted to see a huge wave issue from the side of the bank. Slacking the speed of my bait, I let him have it fairly, and struck him as he turned for his home; he made a gallant five minutes' fight, and has left this 'line cut' on my finger as a mark of his prowess. As I knew these big jack generally hunt in couples, I took another cast, and hooked an equally fine fellow, within two yards of the spot where I caught the first, but I

unluckily lost him when at the last gasp for want of the gaff—which, by the way, I see sticking out of that capacious pocket of yours. The fish I ‘now produce’ (as the Peeler says) will turn the scale at 9 lb. I found the sun very powerful, and my head would have ached considerably if I had not adopted my usual plan. I will tell you what you ought to do. Just get a handful of water-weeds out of the river, wet them and put them in the crown of your cap, it will make your head as cool as a cucumber.”

“Well, I suppose I must give *you* a wrinkle in return for this,” said I. “Do you know how to keep away midges and musquitoes when you are fishing?”

“No, I do not,” said P.

“Neither did I, till last night when reading that delightful book, ‘Life in Normandy.’ I learnt that *turpentine* (I suppose spirit of turpentine is meant) will keep off all the midges in the parish. The author, a true sportsman, says: ‘It is singular how little this is known. Many a man has suffered martyrdom when a single drop of this turpentine would have protected him as effectually as a coat of mail, and allowed him to enjoy a good day’s fishing.’ I for my part do not intend to forget this. If I were about to fish in a ‘midgy’ locality, I should order the chemist to make up the turpentine in what we doctors call an ‘elegant formula,’ which he can easily do; and an ointment thus made can be agreeably spread on the skin of the face and hands.”

“What have you been doing all this while?” said P.

“Well, I have caught one jack, and I have been dissecting him nearly all the time; but I cannot make out what is the use of those curious blind holes (not the

nostrils) that one finds all about his head ; there must be some use in them or they would not be there, and I do not think anybody knows. Besides this, I have been considering how much the power of sight in the jack predominates over that of scent. The fish I caught must have seen my bait at least ten or twelve yards off, for I saw him start from his lair in the weeds, and he came at it like a rocket, almost pulling the rod out of my hand when he got it. He could not have smelt it, though he has nostrils. Depend upon it, a jack's eye is like a telescope to his owner in the water.

“Do you know that whales have a considerable power of smell? It is supposed to enable them to ascertain the whereabouts of the enormous masses of that minute gelatinous sea creature the *Olio borealis*, on which they feed ; whereas porpoises, who are rapacious in their habits, and do not hunt by scent, have the organs of smell but badly developed. As well as my dissection, I have been talking to an old man I met at the weir. He is the real original ‘oldest inhabitant’ of the place, and he says he has been about the mill as man and boy all his life. He is now seventy-seven, his sister is eighty-two, and her husband eighty-seven. This county must be very healthy, for in Fordingbridge churchyard, if you recollect, we found last Sunday after church, on *four* tombstones almost touching one another, the names of seven people whose united ages gave the total of 547 years, being an average of seventy-eight years each ; the youngest was *only* seventy-one. Do you know what they do in the Isle of Wight? They make all the old people of the place go and sit at the doors of the cottages, and then point them out to visitors, making, in

fact, an advertisement of them to cause invalids to come to reside in the village. I wonder the Fordingbridge people do not do the same. My old man's reminiscences, being a miller, are of course 'all about the mill; and the principal fact in his life seems to be that he recollects when flour was 3s. 9d. a gallon, and barley flour half a crown a gallon—but that was in the war time; he says, moreover, that he has seen out three of the Squire's gamekeepers, and one of the parson's, and that he is still 'healthful.'

"Besides all this, the old man has been showing me the eels in the eel-trap by the weir; they are caught on the stage, and the miller says they get sometimes 10 cwt. of a night when they are on the run, and that the moment the moon comes out they cease to run. They are packed up in baskets called 'flats,' covered over with 'spear,' i. e. reeds, and sent away to Salisbury for London. The price at the mill is 6d. per lb. in quantities. I wanted to buy some for our dinner, but I could not unless I bought 45 lb. weight, and don't think we could manage this little lot at a sitting. I have, moreover, had an interview with the wild eels themselves in the river. I was trolling with a dead bait, and thought I had a run, for the line went out famously, and then stopped all of a sudden. I waited a long time, watch in hand, like the man in 'Punch's' picture, and then the keeper looked quietly over the bank to see what was going on. He reported that an eel had got hold of the bait, so I put the rod on the bank, and went to look myself. Sure enough, there were four or five large eels round the gorge-bait, which they were all worrying like a lot of hounds; they rushed fiercely at

it, and then taking a bit in their mouths stretched themselves out at full length quite stiff, and twisted their bodies round and round with the velocity of a spinning jenny, till they had twisted a bit clean out. When one of them had got a mouthful, off he went among the weeds, and another eel took his turn. There seemed to be a whole colony of them under the roots of a willow, for they came out in regular succession one after the other, had a nip, and went back again to their hole. I watched them some time, and at last, when one fellow was in the midst of his gyrations, I twitched the bait suddenly out of the water. His teeth were so firmly fixed in the bait, that I whisked him out on to the land, and fearfully astonished he seemed to be. The eels had taken every bit of the fish, all but the head, from the gorge-hook. The eel I whisked out was a snig.

"I see you mention and figure him in your 'Angler-Naturalist,' and this story will do for your new edition. Suppose we dissect him at once to see for ourselves the difference in the cervical vertebræ. See here, the first half-inch of his spine is almost round, and nearly as smooth to the fingers as a cedar pencil, whereas in the broad-nosed and sharp-nosed eel each vertebra has a spine on the side projecting like the barb of a bone fish-hook made by Esquimaux. You may depend upon it there is nothing like looking at such things for oneself, and not trusting to drawings. If you want to make good preparations of these eels, boil their heads till the flesh is quite soft, and then pick it off with a penknife, or scalpel. But now we must be off home, for I am terribly hungry, and I don't care to be driving that noble grey steed along in the dark."

So away we went home, not, however, to finish the adventures of the day, for when preparing for dinner, I was alarmed at hearing a terrible cry of "Murder, to the rescue! Help, help!"

"Good gracious! what is that?" I exclaimed, and out I rushed.

A fearful noise was going on at the end of a passage, where there was a door; I opened it with a bang, and found myself an intruder upon the Theatre Royal, Fordingbridge, viz., the room connected with the hotel, which the landlord, Mr. Bill, lets out for public occasions, from solemn county court assemblies to lectures and theatrical performances. Dinner over, we of course joined the audience—reserved seats, sixpence; everywhere else, threepence. When we came in, a love scene was going on between a lady and a gentleman, decided Londoners dressed up as rustics for the edification of the real rustics. The lady was complaining that her mother's magpie had informed her that the gentleman had been "flirting on the sly," to which the faithful swain replies that "your mother's magpie tells a jolly lie," the interlude between the various parts of the conversation being occupied by the engaged couple performing a *pas de deux*, and then your mother's magpie chorus again.

There was a peculiar out-at-elbows appearance about the whole of this theatrical business, whilst the scenery was of the rudest description. A few boards had been placed for a stage at the end of the room, and the wings of the theatre were just boards, placed at right angles to the stage, leaving hardly standing-room, and two small corners which acted as the dressing and retiring-room. The scenes were but three in number, one representing

a dwelling-room, the other a forest, and the third (the best) the actual end of the room. These three scenes did for every play. A piano, much out of tune, was played by a woman who once had been pretty, but whose face showed the rude lines of care and misery; though so poor, and evidently an invalid, she was an excellent performer, and prattled music out of the jingling old piano which would have been a credit to any drawing-room. The whole company consisted of six persons, and most extraordinary and clever shifts were adopted by them to carry out their acting. There was, however, such a peculiar careworn and poverty-struck looking appearance about all these poor creatures, that I was determined to learn more about them and their sad story.

The manager, I learned, had been proprietor of several theatres, and had made some considerable sum of money, but had lost it all by theatrical speculation; his wife had once been a star of London theatres, and having a magnificent voice, earned an excellent living. The proprietor had married her, and was with his wife doing a good business when, through simple hard work and over-exertion in singing, one day her voice broke down in the middle of a song, and she lost not only her power of ever afterwards singing, but almost of even talking, for the poor thing can speak only just in a faint whisper. She has, besides this, had a large family of ten, seven being alive. The eldest boy performs the "Cure," the youngest, the baby, is huddled up into a corner while the mother is playing the piano. The next principal performers are a man and his wife, both of respectable parents, and who, I was given to understand, were stage-

struck in their youth, ran away from home, and got married ; years ago the wife took the part of "walking lady," that is, the lady who acts the part of the "beautiful daughter," and who does nothing much but walk about, look graceful, and is made love to ; *now*, alas ! she takes the parts of old women and "mothers," and I regretted to hear the market was overstocked with candidates for this character. The gentleman had once been "the singing gentleman ;" he is now obliged to take almost any part assigned him, and right well he does his duty, being, by nature, a capital actor, and no disgrace to the London boards. This company were in miserable circumstances ; they had walked twelve miles, the morning of the play, with all their properties, and a few bits of scenery, in a country cart ; they had gone to considerable expense in advertising all over the town, and were in hopes of obtaining a success. When, however, the curtain drew up there were about fifteen people in the place, most of those being the average specimens of thick-booted, grinning village boys, who were all clustered together in one corner sitting upon the witness-box, used on county court occasions, like a lot of sparrows on a hedge-top. The faces of the poor actors fell when they saw "the house," but they bravely, however, went on with their performance, "The Lottery Ticket." At the conclusion of this they began the "concert," omitting, with apologies, the "Red Barn." There were but two persons in the reserved seats, which, by the way, consisted of a sofa and some of the hotel arm-chairs. The poor manager's face brightened up a little when our party came in, for we added somewhat to the appearance of plenitude of the room by our pre-

sence, and did all we could to lead off the applause, which the country boys followed willingly enough, but were too shy to begin. During the acts we went down into the street, and finding a crowd round the door we paid for and sent in all the people we could find—some four-and-twenty altogether—in the hope that the room would thus look a little less deserted. All we could do, however, failed to make the room look anything like full. The audience were, I must say, excessively stupid, and were never once thoroughly awakened except when the son of the old woman in the play, who was suddenly made a lord, rushed into his mother's cottage (the window of which was the natural window of the room, and looked very well), upset the dumplings which had been prepared for his supper, and smashed the plate on the floor in the most lord-like style. This "brought down the house," and almost the theatre also; all the clever sayings, jokes, puns, and forcible acting that preceded this were quite lost and fell flat upon the mind agricultural.

The play over, I had a long conversation with the manager, who, poor fellow, was in despair. They had done badly at other places they had tried, and had great hopes of Fordingbridge. The first night they had received ten shillings and sevenpence halfpenny, and there was ten shillings to pay for the room, leaving just a profit of sevenpence halfpenny to divide among six adults and three children. The next night they were still worse; and the proceeds of a whole *four days'* performance gave just ten shillings for a man, his wife, and three children, and three shillings and threepence for each of the other performers—this

wondrous sum being all they had to support them during the week. The cause of the people not coming, they said, was the harvest time, the country people working hard all day, and neither having time nor inclination to come out at night to amusement. They were literally starving, and the poor woman who acted "The Queen Mother" informed me that she had not tasted meat for seventeen days, and that it was as much as she could do to obtain bread and tea. She had walked many a weary mile that day to sell her "benefit" tickets, poor thing, and when evening came was so weak that she could hardly perform her part. One of the party, a pretty young married creature, had walked six miles out and six miles home to sell her tickets at a gentleman's house, but had not sold one all day. The children of the manager, though healthy-looking, were not overfed, and they too were obliged to work, the elder one dancing "the Cure," and singing "The dark girl dressed in blue," whose shrill treble was jerked out at intervals between his shut lips like the squeal of a bagpipe, and then bringing on his little tiny brother, three years and four months old, to take part in a "comic duet." This poor little infant did his part well, his mother playing slowly for him as he danced "the Cure," and encouraging him with her smiles; but when ordered to go on for the encore he became refractory, and was heard plainly stamping his feet and audibly exclaiming, behind the scenes, "I shan't, I shan't." The poor little fellow was, however, very tired, for we took him, after his performance, into our circle, and he fell fast asleep in the arms of my kind-hearted friend, Cholmondeley

Pennell. He was indeed a beautiful curly-headed rosy-faced child; what will be his future, Heaven only knows. His father forcibly placed before Mr. Pennell the advantages which would accrue to the urchin if he were adopted by a gentleman, a course which I was afraid my friend would pursue, so much was he taken with the child's appearance and manners.

A cricket match was to be held on the Saturday, and the poor players stayed for that night, thinking that there would yet be a chance of earning a few shillings. *Alas!* they were again disappointed; the house was nearly empty, and those present had taken only threepenny places. Still they did not disappoint the audience, but went through "the piece" and "the concert" with braver hearts than could have been expected under the circumstances. When all was over, we asked them in to supper, an invitation which they gladly accepted, and much they seemed to enjoy themselves in friendly converse and a good meal. We found them all to be highly-respectable people, well behaved, well educated, enduring without murmuring, but still fighting against the most adverse circumstances, and with a dismal prospect for the future. Poor people! they are off again this morning to tramp along the dusty road to a distant town. We sincerely wish them the success they deserve. How little does one half the world know how the other half lives.

The next morning we went out again, jack-fishing. Pennell went away to fish by himself while I stayed behind with the miller talking to him about the best way to get rid of the rats. After a while my friend returned.

"But you have had no real fishing, at all," said he.

“Have not I, though? I have been hard at work, and have had, moreover, a famous adventure. The keeper said he had orders to drag the mill-tail, and that as it was to be done some day in the week, and I was fond of the water, I told him he might just as well do it when I was there; so we got the net out—and a famous big net it was—and then, making a sweep, we surrounded the pool, letting it out from the stern of the boat as we punted along. The keeper then put on his water-proof boots, as we had to wade the rest of the way. I got out into the water, just as I was, with him, and we both hauled away at the rope. When we were about half through the distance, and the keeper was hauling the rope towards him, and I had got it over my shoulder, both pulling might and main, in about three feet of water, the rope broke off short in the middle. The keeper went flat down on his back and disappeared among the weeds, floundering like a great porpoise, while I took a header forwards into a deep hole. We both got a sound ducking, and were rewarded only by shouts of laughter from the old man, the miller’s family, and two policemen, who came with the instinct of their species, and were glad to get something to look at in a country where their exertions are amply rewarded by one prisoner a month. I myself did not care a rap for the wetting—I had on all flannel, and soon got dry again. The keeper, however, drew a long face, for he was subject to the ‘rheumatics,’ and had put on his water-boots in order to *keep dry*: he was then as wet as a water-rat. The net, I observed before I began to use it, did not seem over-strong—nets very soon rot—and I most strongly recommended the keeper to ask his master to allow him to tan it with

catechu, as the fishermen do at Folkestone, in the tanning-house built by Sir Elias Harvey (brother to the great Harvey), who saw what a wonderful preservative the catechu would be to the property of the poor fishermen.* However, we had a good haul of fish: some magnificent roach, some no less than $2\frac{3}{4}$ lb. weight; two perch, both turning the scales at 3 lb.; and four trout. The poor old man got his share of the roach for his dinner, and the other fish were turned into the stew till wanted for the master's table.

"Did you ever see a dog retrieve fish? If you have not, I can tell you the miller's water spaniel is a wonderful performer. I turned a roach out of the basket, and he caught it in an instant, diving pretty deep for him. And I think I have made a discovery that dogs—at any rate, this dog—is shortsighted, and that when he cannot use his nose he is comparatively powerless. I put a half-dead roach in the weeds close under his nose, and he could not see it; he tried hard to sniff for it, but, of course, could not scent it through the water. I repeated the experiment several times, and always with the same result, therefore I am inclined to believe that dogs do not see so plainly nor so quickly as we do ourselves. We all, moreover, know how difficult it is to get a dog to look at an object just at the moment when we want him so to do.

"I have also observed that dogs will not hunt for things that have no scent. I have tried to make a dog scent a crab, which had just buried himself in the sea-sand at low tide, but the dog's nose would not tell him

* See "Curiosities of Natural History," Second Series.

where the crab was gone. The crab, I suppose, left no scent behind him like a land animal."

"But," said P., "you really must come on fishing, or you will catch cold in your wet clothes." So away we went through a ford that contained as many minnows in the shallow water as there are herrings in a herring-tub; we also saw *plenty* of ducks and *few* trout. I asked the miller about the ducks in spawning-time, and he agreed with me that they work the spawning-beds with the utmost regularity, and that they eat all the trout ova they can find, and that they don't leave a stone unturned. Gentlemen, once for all, be assured you cannot have ducks about the river in spawning-time; if you *have*, good-bye to the young trout. We then both began fishing with the rod. P. caught a good fish, and then came my turn.

While getting my fish out I had to land him through a thick bank of "spear." I caught hold of a bunch of this hard siliceous rush, and my hand slipping with my weight, I cut a tremendous gash in one of my fingers with a broken stem. There was immediately a profusion of bleeding from the wound, which seemed inclined to continue. I had nothing whatever with me to mend the damage, so I began to cast about for an expedient at hand, but could see nothing that would serve as a plaster, and I was miles away from a chemist's shop; at last I recollected I had a bulrush (one of those big-headed rushes, that look like a bottle-cleaner) in my hat, so I immediately broke it in two, and taking a quantity of the down-like seed of which I knew it was composed, pressed it tight on to the wound; in a few seconds the blood made a clot round the seed, and the hæmorrhage

entirely ceased; in fact, it acted like "matico" leaf, which is one of the best styptics we have in surgery. Now for some plaster; but where was I to get plaster five miles from a town, and none in my pocket? My eye lighted upon the jack I had just killed. A bit of your skin, my fine fellow, I thought, will just do; so whipping out my knife, I soon dissected a long strip of skin from off his back. This I lapped tightly round the injured finger, over a good wadding of bulrush seed; I then bound it firmly with some fishing silk, the fishskin becoming tighter as it dried. I was then enabled to go on fishing, which I did for the rest of the day, and felt pleased at the way this impromptu surgery answered.

It was now time to be off, as we heard the wheels of the dog-cart rattle over the old bridge, on the railings of which were cut marks showing the length of a huge trout that had once been caught underneath it, and we soon arrived at Fordingbridge, where the landlady had a capital dinner for us all ready.

Among the dishes was some ham and eggs. I rang the bell. "Where did that ham come from, Mrs. Bill?" said I.

"From Fordingbridge, sir," said the landlady.

"Are you quite sure? Have you had any Irishmen in the village lately?"

"No, sir."

"Then it's all right, thank you," said I.

"What's the matter with the ham?" said Pennell.

"Oh, nothing," said I; "only I heard a story just before I left London, which makes me rather shy of bacon just now."

“What’s the joke?—let’s hear the story.”

“Well, then, a lady told me that four or five Irishmen came a week or two since to Knaresborough in Yorkshire, where she lived, and set up stalls opposite the butchers’ shops. These men brought bacon, which they sold in large quantities at $2\frac{1}{2}d.$ a pound. The butchers were furious, and at last they said, ‘We must hit upon some plan to get rid of these fellows; they are ruining our trade, for the people will not buy our meat at $7d.$ a pound when they can get bacon for $2\frac{1}{2}d.$ ’ As the butchers were talking this matter over in front of their stalls in the market, an old woman came toddling up to know what the beef was a pound. ‘Sevenpence, mum; we can’t sell our beef at the same price as these Irishmen sell the bacon, because—don’t you know all about it, missus? Why all bacon is made from pigs as come from ‘Meriker; and don’t you know, missus, what they feeds them on in ‘Meriker?’ ‘No,’ said the old woman, ‘how should *I* know?’ ‘Why they feeds them on dead soldiers, as has been killed in the war; they picks up the bodies after the battles, and throws ‘em into the pig-sties for the pigs—and that’s what makes ‘em so fat and so cheap.’ ‘Lord! good gracious, butcher! you don’t say so? how shocking! those ‘orrid Irishmen!’ So off goes the old lady, with her bit of beef on a skewer, all round the market, telling everybody she met, young and old, that the Irishmen’s bacon was ‘fed on dead ‘Merican soldiers.’ The news spread like wildfire; a thrifty housekeeper was seen to throw a ham she had just bought for $5s.$ into the road, and nobody would pick it up; even a beggar passed it with contempt, and the inhabitants cleared their cupboards and larders of every morsel of the newly-

purchased bacon. The next Saturday, the bacon men came as usual to the market, and there was not a man, woman, or child near their stalls: they brought the bacon down to three-halfpence a pound—but still no customers; and not even genuine, home-fed bacon could be sold by the regular shops. The Irishmen were furious at the butchers, and the butchers laughed at the Irishmen; anyhow, the bacon merchants immediately shut up shop, sheered off, and have never been heard of since in Knaresborough. I thought that possibly these same Irishmen might have come on to Fordingbridge, and therefore was anxious to know whether Mrs. Bill's bacon was fattened with English barleymeal or dead 'Merican soldiers. There's a story for you! Now pass the grog, if you please; I feel somewhat chilly after my ducking this morning."

BIRD-CATCHERS.

WELL, a little fresh air will do one good this fine day ; where in the world shall I go ? Where's the "A B C Railway Guide ?" Yes, this will do ; I can be back in a few hours, and I have never seen Loughton,* so shall just go there and see what it is like, and come back again ; and if I can get a look at Epping Forest, so much the better. Well, I soon got to Loughton (in Essex), and a very sober, slow, stupid, cockney tea-and-hot-water place it seemed to be. However, as I have never, I flatter myself, visited any place, however slow, without learning *something*, I determined that Loughton should not triumph over me, and form the exception ; nor was I ultimately disappointed, for when walking along a lane whom should I meet but three men, carrying bird-cages in their hands, wrapped in dirty handkerchiefs, while a boy in the rear had a chaffinch in his hand, stuffed in the attitude of an angry bird. I applied my usual key, which I always use when I wish to unlock the knowledge-box of my humble friends, and found

* Near Epping Forest.

that, as usual, donations of beer and cigars soon loosed their tongues. I am a great believer in the power of beer as well as the power of love.

“ Where did you come from, my friends?”

“ Well, sir, we started from Whitechapel Church this morning, at half-past one”—it was then five in *the afternoon*—“ and we ain’t catched only one chaffinch, and he ain’t no great shakes neither.”

Being anxious to be initiated into the mysteries of what Isaak Walton would call “fowling,” I asked how they caught this bird.

“ Why you see, sir, we just walks along and along, till we hears a bird singing in the hedge, or on a tree, and then we sticks this ’ere stuffed bird, which we calls a ‘stale’ (the bird was wired on a bit of wood, with a sharp nail at each end of the wood), into the bark of the tree, and we puts ‘the twigs’ all about him; then we sets this call-bird down in his cage on the ground under ‘the stale.’ He begins to sing, and the wild bird answers him, and comes to drive him off his beat. The wild bird thinks the ‘stale’ is singing, so he goes to battle him, and gets catched by the twigs.”

I asked to see the twigs. They are little bits of whalebone, on to one end of which a pin is fastened, in order that it may be stuck into the bark of the tree, close to where the “stale” is fixed. It is covered with bird-lime, a very precious material. “ You see, sir, this ’ere little ’bacca-box holds a shilling’s-worth, and it would take as much holly as a man can carry on his back to make this little bit; good bird-lime is worth a guinea a pound if it’s worth a farthing. The birds about here, sir, is pretty nigh all catched up; there is a

beauty round by the public-house, but he would not take no notice of us, and the landlord said it was no use a-trying after him, he had been tried after too often; he had got the information, and was regular 'trap-handy.'

"The birds about here is beautiful birds, the 'over-the-water birds' (*i. e.*, birds caught Battersea, Crystal Palace way, &c.) ain't nothing to these 'ere forest birds; and we knows where a bird comes from when we hear his voice, and they are different, too, in blumage,* but there ain't nobody as I knows on as knows how this is, and they say the larned gentlemen don't know nothing at all about it neither."

The last bird in the cage then began to sing most beautifully. "Ay, sir, that's one of the best birds in Whitechapel, and he has beat many heavy finches out of time. We sings him against other birds at the public-houses at night, and a better-hearted bird there ain't in the fancy. You see, sir, we must have good-hearted birds when we goes out a pegging (*i. e.*, catching by means of the stuffed bird pegged on to the tree) or the other birds won't come to fight him. I would not take a sovereign for this bird from any man. The pegging season is from April to June, and the only other birds we catches in this manner is bullfinches, and then they begins with the flight-nets. We never catches the hens; they ain't of no account; but the good-singing birds is worth now half a crown a bird to sell at the bird-shops; but later in the year we sells hens and cocks mixed at fourpence a dozen. We catches them with the flight-nets; it's no use to go out 'pegging' after

* Plumage.

their nests is made. We catches nothing but cock-birds at this time of year; but it's terrible to hear the poor hen a-crying when she has lost her young 'uns. She will follow us for miles, flying after us along the hedge a-crying 'Pink, pink, pink.'"

At that moment the call-bird began his beautiful song again in the cage under the dirty handkerchief, and his owner translated his song into human words for me. "You see, sir, when we sings this bird at matches, we are obliged to listen to him."

"How *do* you know what he sings?" said I.

"Ah, sir, in these matches we are very particular; and if a bird don't *finish his song* we loses a chalk. Do you hear him now, sir? he has finished his song."

"Well, pray tell me how *can* you know that?"

"Why, sir, you listen carefully you will hear that he says, 'Cha-cha-rattle-rattle-rattle-chop wado.' When he's a-singing, if he leaves out the 'chop wado' he ain't finished his song, and we loses a chalk."

I then listened, and the above words give as good an idea of the bird's song as human language is capable of expressing.

"Now them over-the-water birds never finishes their song, and this is what *they sings* :—'Chow-chow-sweet my dear.' And some on 'em sings 'chow-rattle-rattle-chump.' It's no use singing matches with them sort of birds; they ain't no use. We are much obliged to you, sir, and we would much like your company with us out a bird-catching. We have got to walk to Whitechapel, a good ten miles; so good-afternoon, and thank you, sir."

As I came home I saw a foolish-looking cockney boy with a nest of young birds in his hands. Of course,

they would all be dead by next morning under *his* care, and the poor mother is now crying in vain for her young. Ladies, pray forbid the idle boys from bird-nesting, and send your husbands and brothers after them *with the stick*, if you see them looking for nests, and you will be doing much good; for not only do the birds do the gardens much benefit by eating insects innumerable, but consider how *you* would like *your* nest taken away from you, and how would you like to follow the destroyer of your happiness crying, like the poor chaffinch, the mournful "Pink, pink, pink."

Again, ladies should be careful about buying nests of young birds in the spring of the year from the boys in the streets; but last spring a lady requested me to examine some young nightingales which she had bought for a considerable sum. The little half-feathered wretches were all crowded together in a sort of nest, and somehow their physiognomies looked very familiar to me, and the nest was certainly a hand, not a bill made nest. However, the matter passed off, and the young nightingales were nurtured and cared for by their owner in the most attentive way, much to the annoyance of Puss, who was carefully put out of the way for the time. As time went on the birds began to show their feathers. Curious-coloured nightingales, thought the lady; but still she continued to tend them. One day I called to inquire after the nightingales, and the lady anticipated my inquiry. "Oh, Mr. Buckland, what *do* you think! those *wretched* little birds were no nightingales a bit; they were only vulgar common larks after all. I wish I could find the horrid man who sold them to me."

NIGHTINGALE-CATCHING.

I NOW must say somewhat about nightingales and the way in which they are caught by the London bird-catchers. It seems—and it really is—a cruel thing to catch these poor birds the moment they arrive on the shores of England, which bears such a good character for hospitality to all wandering visitors. Nevertheless the poor birds are caught, though I myself for one would be the last to set a trap for poor Philomela. I met the other day two men going along the street with birdcages in their hands, and a lame boy trudging behind them carrying a sack and a hand-hoe. This hand-hoe immediately betrayed their occupation to me.

“How many nightingales have you caught, boy?” said I.

“Ask father,” was the reply; “we ain’t caught only two, and we have been out some eighteen hours in the [Epping] forest.”

I soon made acquaintance with the father, a tall, powerful, big-whiskered-looking individual, with a quick observant eye, gentle hand, and, what is best of all, a

tender heart. He had caught the two first nightingales of this year, and was about to sell them for half a crown each. He intended going on with this catching till he had executed all his orders; for he had orders to get *three dozen* nightingales, which he hoped to be able to obtain very shortly for his customers—the bird-shops.

He then informed me that, in his experience, nightingales always choose the same locality; that many birds might be caught in succession out of the same identical bush or thicket. Once a good place for a nightingale, always a good place for a nightingale. This he thought odd. I did not; “for,” said I, “did you ever know a good house, or a good comfortable berth vacant among ourselves that we did not always find somebody occupying it?” He told me that he called to the birds, using no instrument but his lips; long practice had enabled him to imitate the nightingale exactly; so well, indeed, that they would answer the song—that is, what they considered to be the challenge of defiance from another bird—that which, in fact, was produced by human lips. I asked my friend to let me hear a specimen of his performance. He said he could not, “his lips were quite dead and numb from calling so many hours.” However, the application of a pewter pot containing beer had a wonderfully relaxing effect upon the lips of my friend; and he immediately began the nightingale’s song. I was amazed and astonished at what I heard. The notes he produced were exactly like those of the nightingale, particularly the high and sweet note, “Water bubble,” or “Wheet, wheet,” followed by the deep-sounding “*cur-r-r-r*”—the challenge of the male bird to his rivals. The *male* nightingales come over at least a week before

the females, and if they are caught *before* the arrival of the females, they will live and do well under proper treatment—but it is not everybody who is going to make them live. After the arrival of the female, not one in a thousand will live. Dr. McLean of Colchester, my friend Mr. Coulson tells me, had a nightingale in a cage *twenty-three years*. This was an old bird when he caught it.

I no longer disbelieve the old story of a man being specially retained by the proprietors of Vauxhall or Spring Gardens in days gone by, to sit in a bush and sing like a nightingale. I believe, moreover, that both Sir Roger de Coverley and Mr. *Spectator* were grossly humbugged, especially the latter, for we read that on the 20th of May, 1712, these two worthies took an evening stroll, and Mr. *Spectator* tells us:—

“We were now arrived at Spring Garden, which is exquisitely pleasant at this time of the year. When I considered the fragrancy of the walks and bowers, with the *choirs of birds* that sung upon the trees, and the loose tribe of people that walked under the shades, I could not but look upon the place as a kind of Mahometan paradise. Sir Roger told me that it put him in mind of a little coppice by his house in the country, which his chaplain used to call an aviary of nightingales. ‘You must understand,’ says the knight, ‘there is nothing in the world that pleases a man in love so much as your nightingale. Ah! Mr. *Spectator*, the moonlight nights that I have walked by myself and thought on the widow by the music of the nightingale!’ He here fetched a deep sigh, and was falling into a fit of musing.”

I am curious to know how the “choirs of birds” were

managed. I wonder, too, how much the human nightingale who sang under a bush in Vauxhall used to get as his weekly salary from the proprietor of the gardens, who used to boast, "Hear 'em, sir, why you're sure to hear 'em. We keeps a nightingale."

My nightingale-catching friend told me that he had been "wheeting" and "curring" since half-past four that morning, and that he could "wheet" and "curr" no more that day. Recollecting at the pause of his song that the chaffinch-catcher had put the song of the chaffinch into words, I asked him if he could do the same for the song of the nightingale. He immediately whistled off the song of the nightingale, and told me that there were two songs. The one was rendered thus, in words:—"Wheet-wheet—jug-jug-jug—swattee;" the other (and it generally followed the preceding), thus:—"Pipe-pipe-pipe—water-wabble-wabble—swattee;" but that the bird in full song generally began with the "wheet and curr," and sang off that. He then described how he went to work:—When the nightingales first come over, a regular army of "catchers" go out in quest of them. "It is ten or twelve mile from London before you hears one, and he ain't there long before he gets catched by somebody. It ain't always you can get hold on 'em, because if a bird has been once caught, it makes him artful next time. The way I catches 'em is this—I hears a bird a-singing, I puts down the trap, and fastens some nice meal-worms with pins on and about the traps. I then drives the bird towards the place, and he is pretty well sure to see the worms, and go into the trap. I always scratches up a place, and lays the dirt about where I sets the trap; a bird is

pretty nigh sure to go to a place fresh scratched up" (he is insectivorous, and goes to look for insects in newly-turned-up earth). "They comes over at the end of March or beginning of April. I caught above *two dozen last spring*, and sold them in London. I gets from one shilling to two shillings for 'em when they first comes; then they goes down to ninepence, and then to sixpence each. I sold above a dozen, dead, for sixpence each, to the bird-stuffer for stuffing; the shops soon gets stocked with them. There's a good many *shoemakers* as catches them. They are a very common-looking bird, but a beautiful singing bird, and there is not a bird of the size can beat them in the note. I means to go out next spring after them; but I think I shall get down a good ways from London for 'em."

I cannot refrain, in conclusion, from mentioning a passage (I was flogged at Winchester for not being able to construe it, so I do not swagger about recollecting the quotation) in one of the Greck plays,* where the poet compares, in the most beautiful words, the solitary mourning, in silence and solitude, of the lone nightingale, to a heartbroken mother who, at the dead of the night,

* A lady has been kind enough to send me a Milanese song about the nightingale, of which the following is a translation :—

There was once a king
As wicked as possible,
The Lord changed him
Into a Upoe
Who passes here?

We are Proeno
And Philomela,
Changed into a swallow.
Ah, poor creature!

[Into

when sweet sleep has departed from her weary eyes and sobbing breast, bewails the loss of her dear son, lost to her for ever. The song, the "Jug Jug," of the bird, is supposed to be represented in the soft silky Greek words in which the description is penned by the ancient poet. The idea has struck me whether the nightingales do not go to Greece for the winter, and that the poet might have listened to the song of one of the ancestors of our own sweet songsters.

Nor must I neglect to quote honest Isaak Walton, whose marvellous picture in the South Kensington Museum has lately so riveted my attention that if I were to meet him in the street to-morrow I should know him again. This is the man who wrote the following:—"But the nightingale, another of my airy creatures, breathes such sweet loud music out of her little instrumental throat, that it might make mankind to think miracles are not ceased. He that at midnight, when the very labourer sleeps securely, should hear, as I have very often, the clear airs, the sweet descants, the natural rising and falling, the doubling and redoubling of her voice, might well be lifted above earth, and say, 'Lord, what music hast thou provided for thy saints in heaven when thou affordest bad men such music on earth.'"

Into a horrid castle
Philomela was put;
But she opened
Doors and windows, .
And flew away
To the woods singing
And a nightingale became.

NATURAL HISTORY OF THE SALMON.

NOTES IN IRELAND.

GALWAY AND CONNEMARA.

THE high privilege which we of the present time enjoy of travelling quickly and cheaply to the remote districts of the United Kingdom—not to mention the British colonies and foreign countries—cannot, I think, be too highly appreciated by all classes of society.

The universal Exodus from this great metropolis, like the migrations of anadromous fishes, takes place every autumn, and thousands of gentlemen and ladies liberated from the labours of Parliament, the duties of the bar, the office, the consulting-room, or the toils and duties of London society, spread themselves far and wide through her Majesty's dominions. Many are in search of what is ordinarily called pleasure, many go for sport alone. If these countless observers would only take the trouble—I should rather say, afford themselves the pleasure—of observing and recording what they saw around them, I am convinced that they might gather an immense amount of hitherto undeveloped

information, useful not only for themselves but the public in general.

Within the last few years a great change has come over the habits of the thinking British public. I would especially remark that natural history is now undergoing a new phase, viz., its conversion *into practice*. It was remarked by my friend Mr. Ffennell, the Inspector of Fisheries, at the lecture I had the honour of giving at the Society of Arts on fish culture, that, "in an official investigation in Ireland in which he was concerned, an important question in natural history arose. The parties interested were represented by counsel, by whom the most opposite scientific theories as to the habits and properties of fish were advanced, so as to suit, as far as possible, the interests of their respective clients; until at length an adjournment of the investigation was agreed upon, in order that the questions raised in the course of the inquiry might be referred to certain members of the Natural History Society of ——. It was, however, found that they were not able to give any information with regard to the sole, the salmon, or the turbot, which would assist the commission in coming to a decision."

The field of observation, therefore, is immense, and we are but just entering upon the confines of this unexplored land. I would now, therefore, hoist the colours, and beat the drum for recruits in this good cause, and say to every one, "Keep your eyes open, your intelligence sharpened; facts, facts, facts are what we want;" for no one knows but that a fact, insignificant in itself—if it be a fact—may lead to most important results, not only in the cultivation of land, but also in the hitherto neglected cultivation of that which composes two-thirds

of the earth, viz., the waters, whether salt or fresh. He, therefore, who will discover any new fact relative to the natural history of useful fishes, such as the salmon, trout, sole, turbot, and that bivalved puzzle, the oyster, will be conferring great benefit upon the public at large.

First, then, I would recommend all travellers to supply themselves with good maps on a pretty large scale (the two-shilling Ordnance sheets are the best) of the country they are about to visit, and I would recommend them, before starting on their journey, to read any description that can be obtained of the features and products that will be brought to their notice. In a country new to the traveller there must of necessity be always something that will repay observation. Thus, whether he is in quest of sport or not, he should observe the geological formation, and the products of the country, whether animal, vegetable, or mineral, together with the extraordinary effect the combination of various physical circumstances has upon the habits and personal appearance of the population that cultivate the soil.

Great interest may also be afforded, particularly to the angler, to trace out the various water-sheds which go to form the "catchment basins" of the rivers in which he is about to fish. By taking an Ordnance map of the district, and running a line—never spare a map, write upon it freely—around the *sources* of the springs which supply the main river, it will at once be perceived whence the water is obtained, and what quality is given it by the geological formation through which it flows, and the kinds of fish which in consequence are found therein. Thus, for example, he will learn that the

requisites of a salmon-fishery are three. I will take the Galway fishery as an example.

First, then, we have the sea, without which the salmon cannot acquire its full development; then we have a river of more or less length, up which the fish run from the sea, and a lake; and thirdly, numerous streamlets flowing from the elevated regions and mountain districts around, into the river and into the lake—for the more shallow and rapid feeders there are to any salmon-fishery the more salmon, if properly protected, there will be in it, and *in proportion to the area of breeding ground so will be the number of fish captured in the fishery below*. The question, therefore, of geological *elevation and depression* becomes of great importance in the development of a salmon-fishery in any part of the world. Nor, indeed, must the composition of the water be entirely neglected. Salmon in considerable quantities run from Galway Bay up into Lough Corrib, but *few* white trout are caught with them. In other districts of Ireland, on the contrary, large numbers of the white trout are caught in company with the salmon. The reason of this—and I have it on the authority of Mr. Ffennell himself—is, *the existence of bog water in the rivers*. Those who have fished the streams and lakes about Ballinahinch know well that they contain abundance of white trout. The reason is that, for some unknown reason, white trout prefer streams which contain bog water to those which do not contain it. Again, on the east side of Lough Corrib no white trout are found—there is but very little bog water: but they are found on the west side, where the feeders of the lake run through a country abounding with

Many gentlemen, again, I would venture to remark, start on their travels armed with rod or gun, for the sole purpose of killing or destroying, whether by land or by water; to these I would say, do not care so much for the actual killing the animal or fish, as for the observing of its habits and the conditions of its existence, and the reasons why it thrives in one place and not in another. The actual habits of the living creature, it will be found, are quite as worthy of attentive observation as the transitory pleasure of merely turning it into an object of sport.

A friend of mine not long since pursued an elephant for many hours through one of the trackless jungles of India, with a full determination to slay it. After much toil and difficulty he came up with it, and found the noble animal standing under a tree and fanning himself with a leaf. He pointed his deadly rifle at the unsuspecting animal, but as he was about to pull the trigger, his heart softened towards the poor brute; he laid down the rifle and took up his telescope, and simply *watched him* for an hour or so. Having observed to his content the curious and unknown gestures and actions of this king of the forest, the elephant walked gently and quietly away in one direction, my friend in another. So great was the admiration excited in my friend's mind in watching this noble animal, that in parting he rose up and took off his hat to this king of the forest, and returned to camp thankful that he had not injured such a noble specimen of created power. I need not say that we should all admire the gentleman's kindly feelings, and I here record his name, Edward Blyth, Esq., late Curator of the Museum at Calcutta.

I am quite convinced that if sportsmen would take the trouble to observe the habits of living creatures, instead of immediately pursuing them when they come in sight and shooting them down, their forbearance would be amply repaid.

I will now, with the kind permission of my readers, endeavour to give them some slight idea of what I saw and learnt during a three weeks' run over a country new to me, and trust they will forgive all imperfections and shortcomings.

We came into Galway at dusk, tired, hungry, and dust-covered, but greatly pleased at a prospect of a little hard work *out of doors*. Early bird fashion, I was up pretty soon, to have a look about and a comfortable bath. I walked up from the fishing-house to the weir, and just above the bridge perceived a number of dark-looking objects lying motionless in the glass-clear, ever-flowing water. The morning sun was shining bright, and I was fearful my shadow would fall on the objects, whatever they might be, so I dropped instantly on my hand and knee, and bending forward craned neck at them, feeling a sensation, I should imagine, similar to that experienced by a pointer dog when making a discovery of a covey of partridges on the 1st of September.

Can those dark-looking bodies, then, be salmon? Oh! you shining, lovely creatures! At last, then, I see you free and at liberty in your native element. Mysterious water fairies, whence come ye? Whither are ye going? Why do ye hide your lustrous and beautiful figures in the unseen and unknown caverns of the deep blue sea? Why do ye shun the eye of mortal man? Hitherto I have seen only your lifeless, battered, and disfigured

carcases mummied in ice and lying in marble state on fishmongers' slabs. Who could believe that in life you are so wondrously beautiful, so mysterious, so incomprehensible? Thousands and hundreds of thousands of your babies have I reared up to fishhood, from the moment when the eye of the infant fish in the albuminous egg first became visible to the delighted piswatcher, who has rejoiced to see every stage of your development; and from the time when you ran for protection under the friendly bit of slate in the hatching-boxes; or the gradual absorption of your forage-bag, so wondrously wrapped up in the umbilical vesicle; or when you became too much grown to need human care, have turned you out to shift for yourselves in our noble Thames! But now, there you are, full of life, health, and activity, a herd of water-cattle, impelled by a marvellous *στοργή* to perform the functions that nature has allotted to you, and destined to multiply and to serve the behests of man, to whom has been delegated dominion over the beasts of the field, the fowls of the air, but also over the fishes of the sea, the latter of which privileges he has hitherto so culpably and foolishly neglected!

Ah! what is that? a silver flash in the water for an instant, and then gone again! See, yon huge fish, the master of the herd, the leader of the caravan through the watery deeps, has seen the movement of my uplifted arm. Like an arrow from a bow he shoots forward a yard or two, and then drops slowly and gracefully down into his place. See, again, a game of play between two of the younger and more lighthearted juvenile salmon. No swallow round the steeple-tower, no seagull in a wind, ever sails so gracefully or so swiftly as you; surely

ye are wondrous creatures, and I admire, ah! I love ye.

But why remain here in the shallow water, my pretties? Why not get up into the deep, still waters of Lough Corrib at once, where you would be out of harm's way in the deep silence of the vast lake? Let us see. So I walked along a while, and soon came to the celebrated Galway weir. The water was so low, that it was only just dripping over the edge; but at the west end of the weir was the salmon-ladder so wisely erected for the benefit of the fish.

I had watched my fish thousands of times going up the model salmon-ladder erected by Mr. Ffennell, jun., close to my fish-hatching-boxes at the Horticultural Gardens; but in a moment I saw what a great invention the salmon-ladder really is; how the success or failure of a fishery depends upon this most valuable and ingenious mechanism. We have a hen-house admirably adapted for the farmyard poultry, but it is too high for them to fly up into it and deposit their eggs, which they are willing to do for our special use and benefit. Surely let us place a ladder for them to go up into their wished-for roost. So, too, with the salmon. Thousands and thousands of miles of water will be running this winter deserted and desert in upland streamlets in England; and why? because the fish are prevented and excluded from running up the steep mountain passes which the hand of man has placed across their pathway; it is highly impolitic not to place a ladder. Nay more, is it not only as foolish, but positively as cruel to these noble salmon—whom we thus treat as our worst enemies, instead of, as they really are, our

best friends—not to place a ladder, as to stop out breeding foxes from their earth in woodlands, or to cut away all the covert where pheasants love to breed?*

The Galway salmon-ladder is a fine specimen of its kind; it is constructed of solid slabs of stone admirably placed in such a position that it shall come in direct contact with the main current below, and that the salmon ascending shall find it without difficulty.

Letting myself down from the platform above I observed that the water from the lake came through the first slot or opening in a solid, quiet-looking, board-like mass; but once in the steps of the

* One of the chief reasons why the fisheries of the Thames have been falling off of late, is the construction of the weirs, which are admirable for purposes of navigation, but *perfect* obstructions to the ascent of the fish to spawn. In the spring myriads of coarse fish, valuable for angling purposes, and as food for the poorer classes, assemble at the weirs. For the last three years the weirs have been opened and the fish allowed to ascend; this mainly through the energy of Stephen Ponder, Esq., one of the most active members of the Thames Angling Preservation Society, and with the permission of the Board of Thames Conservancy. At the representation, moreover, of the Thames Angling Society, this Board have most liberally built two admirable fish-ladders, one at Moulsey (Hampton Court) weir, the other at Teddington weir. I advise the reader to examine them. We still persevere in our attempts to stock the river with salmon, and for the last three years have turned out above one hundred thousand young fish, both salmon and trout. We are laughed at for our pains, but the laugh will be on the other side when the salmon are restored to the Thames, which I venture to prophesy will take place at no distant period, when certain conditions, at present unfavourable, become favourable. Anyhow, it shall not be *our* fault if salmon are not restored to our noble river. The public are invited to examine our hatching process carried on during the winter months at my friends, Stephen Ponder, Esq., at Hampton—rail direct from Waterloo; and also our rearing-ponds, also liberally provided by the Thames Conservancy Board—close to the lock at Sunbury. The young fish are here preserved from their enemies till large enough to be set free in the river itself.

ladder, it bubbled and boiled famously, like a young Niagara.

Being in an experimental turn of mind, I bethought me I would for a moment just try and see what sort of sensation the salmon experienced when making their headway through this cataract, and at the same time get a pleasant morning bath. Oh! that I had scales and fins for five minutes, thought I; never mind, I must do without them. I then stepped into the ladder—but as quickly scrambled head over heels out again, for the water had a strong will of its own, and was terribly powerful, tripping up one's feet in an instant. I must look out, thought I, or I shall just go *down* the ladder lubber-fashion, and not up it salmon-fashion, and, *nolens volens*, like a log of wood over a Canadian portage, shall float down opposite my friend John Miller's breakfast-room table, in the fishery-house below, and if somebody does not throw a salmon-fly neatly over me and play me judiciously with the salmon-rod, or Turk, the ganger of the nets at Renmore Point, does not catch me in one of his hauls, by Jove, I shall go out to sea, and barnacles and oyster spat will adhere to me; or possibly I may be "married to a mermaid at the bottom of the dark blue sea, sea, sea;" or I may have to take up my quarters—I should not mind it for a while—with the seals at the back of the Isle of Arran, till I am caught and exhibited as a talking, writing, and performing fish. But "it will never do to give it up so, Mr. Brown;" so I made a cautious descent into the ladder, and, placing my feet against the step below me, imagined myself a salmon, congratulated myself on narrow escapes from the nets and the crevices below, and how very desirable it would

be to get up to autumn quarters in Lough Corrib above. But all I could think or do, I could not advance one single inch. If I moved, in an instant the water knocked me about like a wood-chip in a street gutter after a thunderstorm. So I chose the corner of the ladder where the water bubbled round, and sat there in state, wishing and trusting that some salmon would take it into his head to ascend the ladder while I was there. We should hob-nob very well together, thought I, and we will smoke the pipe of peace together. Presently I heard a voice behind me—

“Bedad ! yer honner, you’re the finest fish I ever see in the ladder this long time ; and, by the powers, if I had got a gaff in my hand, I’d just strike it into your scales, and see how you would like it.”

• I looked up, and there was one of the water-bailiffs, who, watching me from afar off, could not imagine what curious white-skinned creature had got into the ladder and was floundering about in it.

“But I must report you to Mr. Miller, sir,” said he.

So I saved him the trouble, and, running home, reported myself at the breakfast-table, and our host made a note for Messrs. Ffennell, Eden, and the commissioners when they come round again that they must have, at the next session of Parliament, a *special clause* inserted to prohibit Mr. Buckland, and other semi-amphibious Cockneys, from floundering about in the salmon-ladders at unreasonably early hours on sultry summer mornings.

THE SALMON NETS.

You see the ways the fisherman doth take
 To catch the fish ; what engines doth he make.
 Behold ! how he engageth all his wits,
 Also his snares, lines, angles, hooks, and nets.

Bunyan's Pilgrim's Progress.

“WHITHER away, Tom, with the horse Dandy and truck, so early this morning?”

“Going down to Renmore Point, sir, to fetch up the fish they have caught this tide. Will you come along?”

So I lighted my pipe, and, jumping up on to the loose pile of fish-boxes, jolted merrily down to the quay. Going round the corner, the horse shied, and nearly upset me, boxes and all. “Dandy is shortsighted, Tom. We will buy him a pair of spectacles if you will put them on,” said I.

“Dandy shortsighted !” said Tom. “Faith, then, he can see too much, the cunning rascal ; and by the powers ! I was just going to put him on a extra-sized pair of blinkers, for he has too much corn, and, though he does not object to draw the master and the missis in

the car, he can't bear goin' for the fish with the truck."

The fishery at Galway is founded upon charters and rights of great antiquity, and the visitor cannot but be struck with the inscription over Mr. John Miller's door, which runs as follows:—"Galviæ Insula unde civitatis nomen. Jus ad capiendas pisces reservatum Hen. iij., A.D. 1221."* The river which connects Lough Corrib with the sea is but of a short extent, and runs along the outskirts of the town. Through it the salmon must pass on their way from the sea to the lake above, and the salmon when *en route* pay tithe and tribute to their lawful owners, as in former time the barons living in the curious old castles on the Rhine used to exact black-mail from the travellers on the river below. There are three stations where the nets are worked; the principal one is at Renmore Point, which is a mass of rocks jutting out into the sea, and forming one side of the harbour-mouth, while the pier-head forms the other.

As we came on to the quay, I imagined that the men working at the nets in the distance had gone suddenly mad, for they were all hammering at some white shining bodies (like people killing rats in a barn), which were kicking about among the rocks.

"They are just killing the salmon," said Mr. John Miller, the manager of the fishery, who joined us; "they have got a famous catch this morning, and the fish seem in a humour for running up."

"See yon," said I, "that scaly fellow just springing

* "The island of Galway, whence the name of the township. The right to capture fish in the reign of King Henry the Third, A.D. 1221."

clear out of the water, like a sperm whale at play. How he glitters in the air! Surely he is dancing the gillie callum or sword dance. We will have you within the net, my boy, presently, unless you look sharp and swim up beyond its sweep. Look, there is another, and another, and another, all dancing too. Surely an excursion train has just come in from the broad Atlantic, and these are the passengers set loose, and having a free-and-easy among themselves. I suppose it's the sea-lice that's worrying you so, my lads. You cannot scratch them off with your fins, so you are just going to try to shake them off; but they have terrible hook-like claws, and you will have a difficulty to do it." I own I became terribly excited, and as eager to get a haul at the nets as Jim Hills, the huntsman of the Heythrop, is to get "farrard, hark farrard!" to his hounds when the old dog-fox breaks covert from Tar Wood the first hunting morning of the season. So we shouted like lunatics to the men, who immediately saw us, and pulled across to us.

"Ah!" says I, "I see; my little glass magician here tells me that the specific gravity of the water is 1·006, and the temperature 63°, therefore it must be pretty nearly fresh water here, although we are nearly on the sea." Now I can give an interpretation to the problem that was submitted to me in London—viz., how it was that these Renmore fish are caught in the nets which are barely *twelve feet* in depth, while the water below them averages *thirty feet* deep? It is that they prefer swimming in the fresh water, which evidently *runs over* the salt water, like cream over milk; and, having had enough sea-water for some months past, are glad to

have a roll and a tumble in the fresh, into which they have at last arrived.

"Your honour's welcome," said the men, as our boat grated her keel on the rocks. "Long life to your honour!"

"You must show me some sport, lads," said I, "for I have come all the way from London to see you."

"Bedad, Doctor!" (the men christened me "Doctor" at once) "we will."

Fine, sturdy, hardy fellows these fishermen—regular water-dogs, and as hard as nails. Being obliged to remain so many hours in the water, Mr. Miller has given every man a good pair of india-rubber fishing-trousers, to preserve him from cold, which, when night-fishing is going on, is sometimes very great.

"Round with the nets, lads!" cried Miller. The coble (which Mr. Miller has introduced from Scotland) at once darted from the shore:

Finibus omnes

Haud mora, prosilucere suis; ferit æthera clamor

Nauticus, adductis spumant freta versa lacertis

Infundunt pariter sulcos; totumque deliscit

Convulsum remis rostrisque, tridentibus æquor,*

VIRGIL, *Æneid*, v.

Round she went, describing a large circle, whilst the net played itself off from the board at the stern of the coble with a grace and ease that the engineer of the Trans-

- * With shouts the sailors rend the starry skies;
Lashed with their oars, the smoky billows rise,
Sparkles the briny main, and the vexed ocean fries.
Exact in time with equal strokes they row;
At once the brushing oars and brazen prow
Dash up the sandy waves, and ope the depths below.

atlantic cable might well envy. Arriving at the rocks, the men threw over from the head of the boat a heavy stone as an anchor, leaving her to take care of herself, and ran up to a windlass which was fixed to a hole in the rock, and kept steady with big stones. The strain of the rope was tremendous as the tide swayed it away in a huge bag; but at length it approached the shore, and all was excitement.

"There are fish in the net," says Miller.

"How can you possibly tell?" said I, "for the bag of the net is twenty yards off."

"If you look close to the top of the water," said Miller, "you will see two or three little air-bubbles, about as big as hazel-nuts, rising to the surface. Fish nearly always emit these bubbles when in the net, but the reason I do not exactly know; and it requires a sharp eye to see them at all."

"There he is," said I; "a huge fellow has just swum in towards the shore, as evidently aware that he is a prisoner. But he has gone back into the bag; we shall soon handle him, I guess."

In a few minutes the bag of the net began to show at the top of the water, and the men ran on with it up the slope of the rocks. What a sight was there! some fifteen or twenty beautiful slippery, shining beauties, struggling and leaping, fighting and gasping for their dear lives.

The men at once began killing the poor fish, giving each of them a tap on the head with a short club, which they call the "killing-stick;" in some places, I believe, it is called "the priest." I also seized a killing-stick, and helped the men to put the poor creatures out

of their misery; a very slight tap on the head is sufficient to stun and kill them. The blow given, the whole body of the fish quivers and vibrates for a second in the most remarkable manner, and I fancy sometimes becomes slightly iridescent. The poor fish, of course, did not make the least resistance, more than dancing and fluttering about in the nets; but I thought that if they had the power and will to bite us, we men also should have been obliged to dance and flutter about to get out of their way, for they have pretty sharp teeth.

We had hardly finished killing the fish of this haul, before another lot were landed. The gang of fishermen are divided into two parties, and there is always a net being either played out of the boat or else being hauled in every minute during the time allowed for fishing by the tide. Two, three, four hauls consecutively may be blank, but the fifth haul may encircle a large number of fish; the reason being, I am convinced, that the fish come in from the sea in family parties, and swim steadily along, every now and then sounding a halt like a troop of cavalry. If the fish happen to stop in the space commanded by the net, they will of course be all captured; and as it is impossible to know the exact moment when the fish run up, it is necessary to keep the nets perpetually going, hit or miss, on the chance of their being present. It is the finest example of Scottish perseverance—for Mr. Miller hails from the land of cakes, and the nets are under his orders—that I know of. Sometimes the fish are seen some hundred yards out at sea springing out of the water like flying-fish, but still advancing towards the river.

No human being that I am aware of knows for

certain how far the salmon go out into the sea when they descend from fresh water. Miller tells me he has evidence that they go a long way out into the Bay of Galway. One morning, moreover, I had a long chat with the Cladagh* fishermen as they were sitting altogether smoking their pipes, and without my putting any kind of leading question these men all assured me that they had seen salmon in the Atlantic some twenty miles beyond the Isle of Arran, a most remarkable island that forms a natural breakwater to the bay, some twenty-three miles from the mouth of the river, and upon which the huge Atlantic waves break with terrific violence. The men assured me, when they had observed these salmon at sea, they were apparently on the march, invariably jumping out of the water *with their heads towards* the Bay of Galway. I fancy, then, that it must be out at sea that these mysterious fish lay on their winter's supply of fat, and that they do not care to feed when on the march. I have in my lifetime examined the stomachs of hundreds of salmon, and found rarely anything in them but intestinal parasites, and these often in abundance. I have, however, on two occasions found the semi-digested remains of small fish. The teeth of the salmon, however, are certainly rapacious; and from the teeth the food of the animal ought, by a comparative anatomist, to be pretty well predicted. Thus, the teeth of the rapacious shark are as different from those of an herbivorous fish, such as a tench, as

* These men inhabit a certain portion of the town of Galway, and are said to be the remains of an ancient Spanish colony. They keep themselves quite distinct from the inhabitants of Galway. Their history is well worthy of a paper at the Ethnological.

are the teeth of a lion from those of a billygoat. The salmon has rapacious teeth round the jaws, and if the observer will place his finger down the throat of a semi-dead salmon, he will find that it will be sharply pinched by a set of needle-pointed teeth which are fixed into the skin of the gullet, like a precious stone into a gold ring, and which acting in concert break up and comminute the food which has been captured by the teeth contained in the jaws.

Among the fish caught in company with salmon in the Galway nets, I have frequently taken from the gullets and stomachs of *sea trout* the fry of other young fish, which had apparently just been swallowed. The salmon, therefore, have the same chance of feeding as the trout, but they apparently do not avail themselves of it, at all events in the estuary of the river. Still it is extraordinary that when in the fresh water they will take the fly, which fly, by the way, I believe the salmon take not to be a fly in the ordinary acceptation of the term, but simply a shrimp; for if a fly be watched—as I have done—when jerked about by the angler's rod in the water, it reminds one strongly of the quick, jerk-like movements and springs of the ordinary shrimp, and therefore I think the salmon supposes the fly to be a shrimp.*

When examining the fish at Renmore Point, as we rowed them towards the quay where Tom and the cart were waiting, Mr. Miller pointed out there were two kinds of salmon found in the river, viz., the fish of the ordinary colour and shape, the other being what he calls "the black-backed fish."

* See correspondence on the point in the Appendix.

The points of this black-backed fish, as compared to the ordinary fish, are as follows :

1. His back is almost inky black, but below the lateral line he is as bright and glittering as any other fish. 2. His head and general shape is trout-like, the former being often much peaked, and certainly not handsome to look at; the spots on his jaw are large and well defined. He is thicker through the body, but his sides are not so deep as in ordinary fish. The flesh is slightly whiter, but, nevertheless, ten black fish would weigh, on the average, one-fourth more than the ordinary fish. After the middle of June, of the fish caught at Galway, one-sixth are black-backs, but before this time they are only caught every now and then; they have sea-lice upon them, showing that they have come straight from the sea, and they are in as perfect condition as their white-skinned brethren. Finally, the "black-back" can always be recognised, when the eye is once accustomed to him, not only by its colour, but by its shape. Mr. Miller thinks they are a peculiar breed of fish, and differ from the ordinary salmon only as one breed of dogs differs from another; he is also of opinion that they spawn in deeper water (at Cong at the head of Lough Corrib) than the other fish. My own opinion is, that they are fish which have spent most of their lives in dark bog-coloured water, and hence they have assumed the peculiar dark appearance they present,* for, as we all know, the colour of the fish is

* Referring to Mr. Buckland's very interesting paper, "A Run through Connemara and Galway," I would remark, in humble confirmation of his theory, that I could at a glance pick out from a fisherman's basket almost every trout he had caught on the streams running

wonderfully influenced by the colour of the water in which it lives. I fancy, therefore, that these fish have been trying to get up into their own streams, which are not very far off from the mouth of the Galway river, and which are the Farbough, the Spiddle, the Inver, and the Costello; but not finding sufficient water there to run up, have come up to the mouth of the Galway river, as there is generally enough water there for them, and the drier the summer is the better is the Galway fishery. The same thing takes place in Donegal Bay, where in dry summers a great number of fish run up to the Ballyshannon fishery; but in wet weather the numbers of fish caught both in Galway and Donegal Bay fall off, for the simple reason that there is plenty of water in their own streams. My theory that these black-backed fish are simply coloured by the bog water is, I think, strengthened by the fact, that when examining the fish caught by the nets at the mouth of the Ballinahinch river, I observed that there were a very large number of black-backs; and this river, as I stated in my last, is fed by water from off bog land. Mr. Miller has kindly had a photograph taken of a black-back, and of an ordinary fish of exactly the same size and weight as the black-back; he has also sent me fresh-caught specimens packed in ice, of which Mr. E. Ward has made careful plaster casts, and which Mr. Briscoe has beautifully coloured. The casts

through bogs, their sources being on the moors in East Cornwall. The trout are invariably darker—in fact, “black-backs”—and quite inferior, both in flavour and appearance, to the beautifully-coloured fish taken from the rippling clear beds of the Camel or Inney, into which these bog-tributaries flow.—S. S. S.

are now in my Museum of Economic Fish Culture, Royal Horticultural Gardens, Kensington.

The autumn time of year, moreover, it would appear that large cock fish in most rivers assemble together, somewhat after the fashion of deer, and prepare to run up to the spawning-beds in shoals; thus, in some places the autumn fish are as red as foxes, and are called "red cocks;" in other places, as on the Suir at Tipperary, they are called "grey cocks;" in the south of England they go by the name of "blue cocks;" on the Blackwater, co. Cork, they are called "blackberry fish," because they come at the time of the blackberries; and on the Tweed they go by the name of the "grey schule." I have the above from my friend, Mr. Ffennell, who seems to think with me that these Galway "black-backs" are bog-water fish that, like fish in other rivers, are just now running up towards the spawning-beds.

Amongst the fish caught at Renmore Point, every now and then we caught some regular Paddies, who, I imagine, had either been inoculated with the national love of fighting among themselves, or else had escaped the persecution of their enemies. These fellows had got scars all over them, but principally on the tail behind the dorsal fin; they were long scratch-like wounds, as though the fish had been touched with a red-hot gridiron, and the wounds healed up afterwards: one fish I was lucky enough to find had just come out of a row, for his tail was scarred all over as though he had been cut with a cupping machine. These are of course teeth-marks of voracious fish, and another enemy must be added to the list of enemies to the salmon. That they have plenty of them in the sea we all know, but what

they are we are by no means quite certain, though I have a pretty long list of them. The angler-fish (*Lophius piscatorius*), I am perfectly convinced, catches, however, a large number of young smolts—young inexperienced salmon, who enter the sea for the first time in their lives—in its capacious mouth, attracting them by means of its curiously-contrived rod and floating bait. This, I believe, particularly holds good as regards the estuary of the Severn. I could not, however, make up my mind what fish had scarred the backs of these Galway salmon, till, returning from the nets, I passed through the fish-market, and here my eye fell upon a boat from which the fishermen were tumbling out a large number of *gigantic hakes*. On examining the teeth of these rascals, I found they would cause just such wounds as I found on the salmon; and I believe, regarding the matter as a question of medical jurisprudence, that a true bill might be returned against the hakes for maliciously cutting and maiming the salmon.

Another result of my examination of the salmon caught at Renmore Point in the net revealed the existence of a worse enemy even than the hake. One poor fish had the left gill and positively half the head just hanging on by a bit of skin; another had a great rip in the side, which had festered and caused an ugly wound; another had his nose completely smashed off, and some few had anglers' flies sticking in their mouths. In two which I examined the flies had evidently been in their mouths a long time, and rod fishermen will be pleased to hear that the fish were in no way fallen off in condition, and that, ulceration round the hook having

taken place, it would eventually fall entirely away from the fish's mouth. The poor fish who had had his nose smashed in—and I saw three or four of them during a fortnight's watching at the nets—had evidently made too close acquaintance with a mill-wheel, but the other wounds had been inflicted by what are locally called "snatches," or "stroke-hauls." I have now before me a collection of formidable and cruel instruments (like the instruments of torture exhibited at the Tower of London), which had been taken from the fish caught in the net, and presented to me by Mr. Miller. No. 1 is an ordinary fishing fly; round the shank of the hook is twisted some heavy strips of lead. The twisted gut above is also armed with a strip of lead; this is thrown in an ordinary way from the rod when the water is shallow, and sinking down among the shoal fish, is snatched suddenly through the water on the chance of foul hooking a fish, and I fear it too often succeeds in so doing. No. 2 consists of a sea-fishing hook, tied on to a twisted gut; but about three inches above it is attached a small bullet; this, too, has evidently been thrown by a rod, as there is a piece of excellent plaited fishing-line attached to it. No. 3 is a terrible-looking instrument; it consists of three very strong cod-hooks, tied in the shape of a triangle on to a piece of common string, and heavy lead is twisted round the string for eight inches above the hooks; it evidently acts on the principle of a grapnel, such as is used for recovering the bodies of drowned people. No. 4 is a hook as large as a small gaff-hook, and to the string a little way above it is attached a heavy piece of lead, weighing a quarter of a pound. I strongly suspect that this is the identical

hook that nearly tore the poor fish's head in halves, for it was taken out of another fish by Turk, one of the fishermen, the day after I examined the specimen in question. How these latter instruments got into the fish, I shall explain hereafter.*

The use of these instruments is cowardly and un-English-like, and the users of them ought to be served in the same way as a certain English officer served a John Chinaman. He was asleep in his tent, and waking suddenly up, he saw a Chinaman stealing from his table. He ran after him, luckily picking a fish-gaff as he passed out of the door. Seizing the Chinaman's clothes, he essayed to pinion him, but his garments slipped off the thief's body as suddenly as does the drapery from a statue at the inauguration thereof. The pursuer then tried to seize the flying Chinaman by the waist; but the rascal had oiled his body so perfectly that he was as slippery and as difficult to hold as a greased pig at a country fair. He then caught hold of his long pigtail; but the rascal had filled this with pins and needles, and other sharp cutting instruments. In a fit of desperation, and as the thief was likely to escape, he said to himself, "Well, if it comes to this, I *must* gaff you, so here goes." Lunging well forward, he plunged the gaff into the bacon-like carcass of the Chinaman, and brought him up suddenly with a run. The fellow cried ten thousand murders, and called upon all the saints in the Chinese calendar to deliver him from the infernal machine of this Hang-qui-lo, or European white devil.

* These instruments can be seen in my museum at the Horticultural Gardens.

MILL-WHEELS.

EXPERIMENTS ON SALMON, ETC.

I WISH now to say something about the great injury which mill-wheels do to a salmon fishery. Fishing on Monday morning at Renmore Point with the nets, I observed that several of the fish looked very thin and out of condition, as though they had been ailing for some little time past. The cause of this is as follows:—

The salmon which escape the nets when the water is low go up the river, and, meeting with the mill-races, where the water comes down much more rapidly than it does down the main stream, naturally imagine that the mill-stream is the channel which will lead them to the upper waters; they go up this as far as they can, and frequently head up so close to the revolving flaps of the wheel that they receive fearful blows on the head. At Galway there are mill-wheels situated several yards at the further end of long, cellar-like, dark arches—like the Adelphi arches on a small scale. The mill-race which empties itself into the Galway river just above the bridge on the right-hand side (looking towards Lough Corrib) is no less than 300 yards long, and there

are six arches at the upper end of it, each arch being 30 yards long. The fish get up into these arches, and there stay for a whole week, of course being obliged to keep up their steam continually in order to hold their own in the rapid stream.

But they have worse enemies to contend with than the stream and the wheel, and these are the millers' men; and the proprietors of the fisheries—to whom the fish belong as much as a farmer's poultry in a farm-yard belong to the farmer—knowing that these men are in the habit of poaching the fish in the dark arches, place regular watchers at the mouths thereof. These men are on duty day and night, and their sole business is to stare up the arches and see that no poaching goes on. The millers' men watching their opportunity stop the wheel suddenly, and getting down into the dark arches, strike right and left with formidable gaffs and other instruments at the fish, now helpless in shoal and almost stagnant water. The keeper, perceiving that poaching is going on far up in the dark arches, endeavours to creep up and identify the poachers. Perceiving the keeper coming, the millers' men crawl away as quickly as they can by the side of the wheel up into the mill, and, turning on the water suddenly, send the full stream down through the dark arch. If the keeper be not quick enough to get out of the way before the water reach him, the stream would strike him instantly, trip up his feet from the slippery boards, and carrying him into the river, drown him.

On these occasions many of these poor salmon are grievously wounded by the millers' men with the "stroke-hauls" and other forms of gaff. Some escape

with these instruments still adhering in their bodies, and fly for refuge into the river. Thus, then, I account for the formidable poaching instruments which I described a page or two back, and which were taken from the bodies of the fish caught in the nets. An incessant war and bitter hostility is, therefore, going on between the keepers and the millers' men, to say nothing of the evil effects to the men's morals, who have always the temptation to steal strongly before them.

The salmon also, even if they are not gaffed, suffer materially. It may be observed that I stated that these mill-race fish whose condition had been injured were caught generally of a *Monday* morning. The reason is obviously that when the mill is shut off on Sunday, they find out their mistake, and that they are not in the main stream; they therefore drop back into the river, and are caught in the net some ounces lighter than they were a week before. Mr. Miller assures me that the money damage done to the fishery from this cause and the poaching by the millers' men amounts in the year to a very large sum.

The remedy for all this is perfectly obvious: it is simply to place a grating at the mouth of the mill-race in order to prevent the salmon ascending, and so to do away with the temptation of poaching and stealing. The millers, however, object to grating of any kind being placed at the end of the mill-race, upon the plea that it would block back the water, and interfere with the action of the mill-wheel.

When I was examining the models, &c., deposited by the fishery commissioners at the Exhibition at Dublin, Mr. Brady was kind enough to show and explain to me

the models of all the various contrivances which had been proposed to obviate fish running up mill-races. The first was invented by Mr. Eden, Inspector of Fisheries, and consists of a cruipe or V-shaped grating, placed the wrong way. A salmon is rarely known to go out of this trap when once in it as it is set in the regular weirs. It is argued that when it is set the wrong way, he will not go into it. The weeds would at the same time have space to pass through the bars and the opening into the stream.

The second plan is proposed by my learned and highly-scientific friend Dr. Carte, Professor of Natural History of the Dublin Royal Society. It consists of a wheel made of light wire, like the turning-barrel of a squirrel's cage. It is intended to perpetually revolve in the water. The weeds hitting against the wheel would cause it to revolve and let them out, while no salmon would be strong enough to cause it to revolve in the opposite direction and let him through into the mill-race. Mr. Brady's invention consists of a moveable bar, through which spikes are run at right angles, just like the *chevaux de frise* round the cannons on the Horse Guards Parade. This water fence is hung very lightly at the two ends, and when the weeds come they force it up and themselves through. The fence instantly falls again by its own weight, just as do the wire slanting entrances to the ordinary wire rat-traps, through which the rat can easily crawl, but which never let him pass out again. The objection, however, which would of course be urged to these various and ingenious contrivances invented by the above-named gentlemen are principally that, even if they let pass all the weeds and rubbish,

they would throw the water back upon the wheel. I am not engineer enough to know what amount of interference with a stream could be allowed below the wheel without doing damage to its working power. The following calculation will, however, give some idea of the amount of water that would be thrown back by bars:—

Supposing the arch of the mill-race to be forty feet across, and a grating to be placed, made of iron bars half an inch thick and two inches apart (I find a 9lb. salmon is just about three inches in thickness through the thickest part of the body), the total space occupied by the bars would be eight feet; and I fear the millers would not like this eight feet to be taken out of the forty feet width of the water course.

In talking over this matter with my friend Mr. Ffennell, Inspector of Fisheries, he informed me that he had for a long time been endeavouring to get the proprietors of mills to adopt a plan of his own, which he has kindly allowed me to mention in this place. It is, to have a net made of the same strong material as formerly used in stake-nets, the net to be of a funnel shape, and from ten or twenty yards long, according to circumstances; the upper end or mouth of the net should be affixed to posts driven into the bed of the main river, at the point where the mill-race enters it. The free end of the net should be made round and barrel-shaped, and wide enough to admit a man's body, so that the weeds and rubbish would be allowed to pass through it; the salmon coming up-stream could not possibly get through the meshes of the net into the mill-stream, nor yet would they be likely to enter the wide aperture at the end, as it would be continually

swaying backwards and forwards in the river, and the swiftness of the current would prevent the fish from even finding their way into it. I trust that this hint may be useful to fishery proprietors, and that it may be tried practically. Mill-races differ much in circumstances: in some the stream is greater than in others, in some the fall is more rapid; in some there may be difficulties in fixing the net, in others none. Mr. Ffennell, however, feels confident that the principle of keeping the fish out by means of a floating net will be found to be of great service, and we both agree that it is a subject well worthy of inquiry and discussion; and in the case of any grate or net being fixed at the mouth of a mill-race, that it should be officially inspected by a competent engineer, so as to give satisfaction to all parties concerned.

I have stated that a salmon very seldom gets *out* of a cruive when he is once in it, and this very fact has afforded me considerable amusement. The first thing I did every morning, while I was staying at the fishery-house with my friend Mr. Miller, was to run out and examine the cruive to see if any fish had gone in it during the night. The water is so glassy clear at Galway, and it is so chemically pure that one has a peculiarly favourable opportunity of examining a living salmon at one's leisure. The first thing, on looking at these beautiful living salmon in the cruives, that struck me, was their peculiar colour when in water and examined from above.

I think we anglers and naturalists generally place the dead fish in his wrong position when we wish to look at his proportions. A fish does *not* swim on his

side, but yet we put him on his side to examine him : we should rather place him so as to look down upon his back, for the fish's side is never seen when he is in the water. A salmon on a fishmonger's slab looks all silvery and bright, but when seen alive in the Galway fish-gap he appears as we look down on him to be of a red mahogany colour, beautifully spotted with black marks, not at all unlike a dark-coloured leopard, and one sees no silver colour at all about him. His eye is so situated in his head that the vision shall be directed upwards and forwards ; and in the living fish it projects considerably beyond the level of the head. I do not, therefore, think that a salmon can see what is going on *behind* his head ; but for an object floating down-stream, his eyes are stereoscopic, or, if you please, microscopic. I use this word advisedly, as with considerable care I have made a dissection of the eye of a salmon. Running a section behind the cornea, and placing the crystalline lens upon a piece of newspaper, I found that it magnified the letters to an extraordinary degree, and even to a greater extent than a pocket lens. Strange, too, the piece of newspaper taken up by chance which I examined happened to have the following printed on it:—"A new Irish grievance has just cropped out, &c." Funny, then, that I should be reading this through the eye of an Irish native (even though it were a fish) which was endowed with the power of magnifying, even though the object magnified—for we must have our joke—be a grievance. If, again, the lens be suspended on a needle point, and held between two observers, so that each observer looks through it, the effect will be found to be most curious and comical.

It struck me, when I was watching the salmon, that it was very extraordinary how the fish held his place against the stream. I therefore wished to find the actual cause of this. The body of the salmon is one solid mass of muscle, and all the muscles are devoted to one purpose, viz., that of swimming. In the bodies of land animals we have muscles for flying, and muscles for jumping, leaping, and other motions of the most diverse character. But the muscles of the salmon are all adapted for one object, and one object alone, viz., that of swimming. Still his weight in the water must count for something; I therefore took the opportunity, as he was taken from the net, of weighing a fish just rapped on the head with the killing-stick. I suspended him by the back fin to the hook of an ordinary angler's weighing-machine and weighed him, first in the air and then in the water. In water of the specific gravity 1·0015, *i.e.*, slightly brackish, a 9lb. fish weighed one quarter of a pound, and a 4lb. fish weighed simply nothing at all. In fresh water at 1·0005 a 19lb. fish weighed 1½lb. only, at a temperature of 64°. Thus we see that in reality a fish has very little weight indeed to carry when in the water, and we begin to understand how that, his weight being comparatively nothing, he is enabled to apply the whole muscular force of his body to stemming the rapid streams in which he rejoices to live.

It then occurred to me to try what was the traction power of a salmon when pushing in the water. Having obtained permission from Mr. Miller to try the experiment, I let myself down into the cruive, where three fine salmon were swimming about. The moment

I was in they began dashing about, and nearly knocked me off my legs. I selected the biggest, and when he was a little tired crept slowly and cautiously up to his head and quietly slipped over it a set of leather harness which I had made on purpose to fit his body in, the collar coming below his pectoral fins. I then attached to my waist an ordinary fisherman's weighing scale,* and fastening the traces of the fish's harness, which were swimming loose in the stream, to the hook of the weighing machine, stirred him up suddenly. In a moment he plunged forward like a thoroughbred colt first placed in harness, and in an instant smash went my first harness all to ribbons, and my friend bolted away like a mad fish. Determined, however, not to be beaten by a salmon, I got a stout piece of cord, and after some difficulty, as the salmon was getting very artful and shy, managed to slip it over his tail; so getting a firm hold of what the fishermen call the salmon's "wrist," and kneeling down in the water, in order to give him fair play, I stirred him up again. The first plunge pulled the weighing scale out to 23lb.; the successive plunges were 20lb., and then 15lb., and then hardly anything at all. At last he seemed exhausted, and showing his white side, allowed the stream to carry him broadside on to the bars of the cruive, a sure sign that he had had enough of it. I much wished Mr. Rarey had witnessed this experiment in breaking a salmon colt into harness; I think we should have had some fun about it. From this and repeated observations of the same kind with other salmon in the cruives, I am convinced that a salmon's escape from the angler's hook depends much

* Pocket-scales, the weighing part of which pulls out.

upon the first plunge he makes, and that although his power to go against the stream be very great, yet he is very soon what is vulgarly called "done," if called upon to make extra exertion.

I regret much that I was not able to bridle a salmon or place a hook into his mouth. I tried to do it several times, but he was too quick for me. All the reward I got for my pains was a sharp scratch on the finger from one of his teeth, when once I got it into his mouth trying to put on the bridle.

While I was trying the experiment with this salmon there were two others crouched, as it were, up into a corner, and evidently afraid their turn would come next to be put in harness and made to draw. I managed to crawl very gently and quietly alongside the biggest of these fish, and after several trials succeeded in placing my finger on the point underneath which I know the heart was situated. I could feel it distinctly beating and thumping through the skin on to the end of my finger. I then requested a friend standing upon the weir to take out his watch, and we thus ascertained that the pulse of this individual salmon beat 92 to the minute. I then tried the other fish, and found that his pulse was 103 to the minute. I also counted their respirations or the movements of the gills in breathing; the first fish respired 77 times in a minute, the second fish 79 times in a minute. I must, however, state that these fish had been running about the cruive whilst I was trying my experiment with their relation, and I dare say they were in a bit of a fright, and their pulse beat quicker than usual, as I know from experience the pulse of a patient who comes to consult the doctor

is often bounding away at a famous pace from pure nervousness.

When a salmon is knocked on the head by the killing-stick, he is generally dead in about a quarter of a minute; and, being anxious to know how long a salmon really would live out of water when left to die uninjured, on another occasion I quietly slipped a large landing-net under a 10lb. fish which had just come into the cruive. I then suspended the landing-net in such a manner that he could not injure himself, and I was rather surprised to find that he ceased kicking in about seven minutes, and eleven minutes elapsed before he was perfectly quiet and dead. The temperature of the air was about 68°; if the day had been colder, I think he would have lived much longer.

The water of the Galway river being so remarkably clear—the specific gravity was only 1·001—and at the same time very low, owing to the long drought, when I visited it, I have been enabled to make other observations on the salmon. One of the chief characteristics I observed about the salmon was, that its nature appeared to be as much gregarious as that of sheep or oxen. This, however, is not always the case, but obtains only at the time of their ascending the rivers. I have watched for hours large numbers of salmon in the river between the bridge and the weir at Galway, and hardly ever saw a salmon entirely by itself. They seem to love to make up family parties, and their favourite position seems to be side by side, their fins almost touching, like cavalry horses in the stables at Aldershot; and when one of the party goes away he soon comes back and “falls in” with a regularity that would do

credit to a soldier. One very bright Monday morning I counted in the space from the bridge to the weir, which is not more than 150 yards, about 280 salmon, there or thereabouts; they had divided themselves into family parties, and were therefore not very difficult to count, except the sentries of the parties, who, alarmed by our presence, perpetually shifted their ground, and therefore, like the country boy's little pig that kept running in and out among the other pigs, were very difficult to count.

I was very much struck with the propensity the salmon have of keeping each other company by the following fact. One morning early I observed two fish in the main stream under the wall of the weir—possibly male and female, for I am not at all sure but that salmon pair off early in the autumn—I stole up on hands and knees, making myself as flat as possible, and watched them for a long time, thinking what pretty creatures they were; at length one of them saw me, and dashed right away. I remained perfectly quiet, and after a while saw this same fish at a distance gradually piloting himself back again, like a Great Western engine feeling its way into the Paddington Station when the danger signal is up. Thinking the road clear, he gradually dropped himself down into his old position and lay alongside his friend, who, by the way, had never moved at all. “Halt—front—dress,” said I, to the salmon. The fish obeyed the word of command; he “dressed up” to an inch, and there these two beautiful creatures lay side by side like babes in a wood. A few minutes afterwards my fidgety friend took himself off again, and made a second reconnaissance of the neigh-

bouring waters ; once more dropping back into position. Still I remained perfectly quiet ; and I cannot help thinking that this nervous salmon communicated his fears to his less timid companion, and whispered into his ear that the ogre-like monster that was gazing at him from above was "no good." His warnings evidently had effect, for all of a sudden, without giving any notice, they both darted away together, like arrows from a bow, and I saw them no more. Whither, oh whither away, ye mysterious pilgrims of the waters ? May good luck attend ye in your perilous voyage—

"From the black shores of the sea, to the lands where the Father of Waters
Seizes the hills in his hands and drags them down to the ocean."

In a former page I gave some account of the gregarious habits of the salmon when on the march from the sea to the spawning-beds on the upper lands. These curious fish, however, do not appear always to keep in droves or flocks together, for when the actual spawning-time arrives, by a wonderful instinct, each fish seeks a place where to build its own nest, and for this purpose they distribute themselves over hundreds of square miles of country, scattering their numbers in all directions, like bees flying on honey-collecting expeditions from a hive on bright sunshiny days, nature's object evidently being to scatter the supply of young fish over as large a tract of country as possible. The herding tendency of the salmon can, however, be again observed in the smolt on his way to the sea ; and a friend of mine, who has been a great observer of the habits of salmon for many sea-

sons, has a very curious theory as to the way the smolts get through their sea-ward journey. "They go," he says, "with their heads pointed up-stream, and working their tails gently against the current, sway themselves backwards and forwards, tacking, as it were, like a ship, to and fro in the water, but still always dropping downwards." The consequence is—and it is a most ingenious theory to account for the salmon returning to the rivers where they were bred (which I believe they do)—that the young fish know their way back again to their own homes, where they were bred, when they return as grilse. Thus, on returning up-stream, from the sea, they would see this rock and that rock, this stump and that stump of a tree, and other water-marks best known to themselves, just in the same positions as they saw them when they went to the sea; whereas if they performed their downward journey *head foremost*, the whole position of the objects they passed would be reversed as they returned. I give the theory as it was told to me. I think, however, that the same wonderful instinct present in migratory birds, and also present in migratory fish, has much, if not everything, to do with the return of salmon to their own waters.

Again, when the smolts arrive at the edge of a waterfall they sound a halt, and, backing gradually towards the point where the water flows over, hover to and fro at the edge, and then swiftly swim up the stream again like swallows skimming round a steeple tower hawking for flies. At last, one of the more daring of the smolts lets the water take him over the fall, and the others at once follow like a flock of sheep

going through a gate into a pasture-field. But mark the position of the young fish when he takes his jump, for it is *tail* first and not head first; the consequence is that, should he happen to alight on a rock below, his flexible tail being light and elastic, causes him to rebound from the rock and receive no injury.

If he went down head foremost he might possibly meet with the same fate as happened to a fine young soldier of a light cavalry regiment when I was quartered with the 2nd Life Guards at Aldershot. He was a good swimmer and fond of bathing, but unfortunately did not know the water. Arriving in a great hurry one very hot day at the side of the canal, he asked some soldiers who were standing by if the water was deep; and on their replying very wrongly in the affirmative, he took a long run and graceful header into the canal. Alas! he had been misinformed; the water was only about four feet deep, and the poor fellow's head hit upon the bottom with the force of an artillery rocket, killing him in an instant by fracturing the vertebræ of his neck. I do not mean to say that the same thing would happen to the salmon as happened to the poor soldier, but still it is curious to see how nature anticipates violence to the tender body of a young fish in going over waterfalls on his road to the sea, by making him go tail and not head foremost.

There must exist in fish some wonderful power of which we who live in the air are not cognisant, viz., the power of avoiding obstacles in water; for who ever saw or heard of a fish, even when frightened out of his wits and scudding away with the utmost rapidity from an enemy, dashing his head against a rock or a stone? They

seem to thread what to us appears the most intricate labyrinth of weeds, stones, and all kinds of obstacles with the agility of a woodcock threading the thickest underwood. I cannot help thinking that the fish *feels* his way in the water by means of some curious power analogous to that possessed by those of our own species who have lost their sight, or a bat flying about among trees and rocks in the darkening shades of the evening.

As regards the much-disputed question as to how long the smolts remain in the sea, I have the following cases to put in as evidence. Mr. John Miller, of Galway, tells me that salmon were bred artificially at Doohulla, and upwards of 7000 of them were let loose in the river; none of these fish came up that same year, but the next year 130 were caught and over 100 were marked; there had been no salmon in the river before, therefore these must have been the same fish. Again, at Ballysidare, several hundred smolts were marked in May, 1858. In June, 1859, twenty-four of these fish were caught as they were coming up, and twenty-three were marked fish. They averaged 4lb. weight each. This not only goes much in favour of the idea that smolts, even when they get to the sea, are gregarious, going and returning in flocks, but goes far towards proving that the smolts, at all events *some of them*, remain but one year in salt water.

The other case that I have to place on record, is that kindly sent me by Mr. Alexander Miller, of Chepstow who writes as follows:—

Chepstow Salmon Fishery, Fish House, Aug. 10, 1864.

SIR,

I send you two grilse caught on the Wye at Chepstow, marked by cutting off the dead fin, for your inspection.

We marked 170 of lastsprings (or smolts) going to sea in the spring of 1863, by cutting off the dead fin and leaving a peak to insure our mark. The two fish now sent to you bear the mark we made—at least one of them, the other appears to have got an accident, which is not so certain. These two fish weigh 5lb. each, one being caught last night, the other and freshest caught this day.

I may mention we caught another grilse last Thursday (4th) having the same mark, namely, the dead fin cut off.

We are quite satisfied as to these being the identical fish marked here at Chepstow by us.

(Signed)

ALEX. MILLER.

I have carefully examined and made casts of these two fish, and, as far as I can judge, I have every reason to believe they are fish which were marked in 1863 as smolts and returned in 1864 as grilse. Both Mr. John Miller, of Galway, and Mr. A. Miller, of Chepstow, intend making further observations. The two cases they now are good enough to allow me to make public are most interesting and instructive; their observations do them much credit.

My own faith as regards this curious question is, that some of the smolts stay one year in the sea, some stay two years, and possibly more. Individual observations are of the utmost importance, yet we should, I think, look at general principles as well.

It appears to me to be a law of nature that the salmon (say in an individual river) shall never be all together at the same time, and this as a protection against their numerous enemies, both animate and inanimate. To take the case of the smolts alone—supposing the smolts going down the Galway river in the spring of 1864 were *all* in a fit condition to come up from the sea in 1865, it is possible that some cause or other might destroy them all, and thus the whole produce of one

breeding season be lost to the river. Nature, however, seems therefore to say, "I will send some of you youngsters up the river in 1865 and some of you shall stay in the sea till 1866; so that if the first lot of you get destroyed, there will be a second batch on hand to take your places and keep up the supply in the river for future years."

Again, in our own species, we do not all take our stand in the battle of life at the same age. Some boys are sent to "cut their own grass" at eighteen, some not till twenty-two or twenty-three. Young Ladies, as well, do not always "come out" at exactly the same age.

As with girls and boys, so with young salmon; the former do not all begin life at the same age, the latter do not all make their first ascent of the river at the same period of their existence.

As regards the age to which fish live, I beg to place on record the following:

In December, 1852, Mr. John Miller marked several salmon, and ever since an odd one of this lot has been caught every year in the Galway nets. This spring (1864) one of these same fish was caught with rod and line; now supposing him to have been three years old when he went down as a smolt, that would make him fifteen years old when he was caught, and in this time he had attained the weight of 19lb. We are, however, still very much in the dark as to the growth of fish *after* the grilse state, but I trust we shall find it all out some day.

I know there is a difficulty in placing a mark upon a fish; this marking, in my opinion, should never be placed near the tail of the fish, from whence, as we all

know, he derives his motive power, just as a screw vessel goes along by means of her screw. I would therefore suggest that a piece of silver wire, such as is used in surgical operations, should be attached, either in the form of rings, like the twisted rings of African gold-wire we see occasionally, or else simply bound loosely in a corkscrew fashion, round the first ray of the back fin. This fin's duty is to act simply as a balancing-fin to the fish; a twisted wire ring, therefore, attached to it would not interfere nearly so much with the action of the fish in the water as if it were fastened to his tail.

Again, whereas surgical experience shows me in all animal tissues the marks of burns from fire are extremely difficult to eradicate, I would suggest that the gill or other part of the body of the fish should be touched with fire and an eschar formed. The difficulty of doing this at first sight presents an obstacle, but I fancy I have hit upon a plan of obtaining a branding-iron at a moment's notice; for what is a more easy way of doing this than by lighting a vesuvian cigar-light (which one is sure to have at hand), and therewith impressing a seal upon some part of the fish, say his gill-cover? I have done this on live fish and let them go again; the skin or scales are branded in an instant, and I would guarantee, from my medical knowledge, that the mark of it would *never* be eradicated. This plan is better adapted for marking larger fish, as grilse, than smolts; it can, however, be applied to these if the patient be held for a moment in a dry cloth, and the operation quickly performed. It may be urged that this is cruel, but it is not more so than branding foxhounds (as I have seen done) and forest ponies, and the

importance of gaining the required knowledge may be urged as the excuse. Moreover, I really do not think the fish feel it much, for there cannot be many cutaneous nerves distributed on his scaly armour.

I marked several fish last Christmas at Galway, in a great variety of manners. On to the fin of one I fastened for fun a fourpenny piece with a hole in it. The net-men who were assisting my operations did not seem to like this waste of money. "A sovereign," said I, a few minutes after I had let this moneyed fish into the river—"a sovereign reward for any man who catches that fish next season in the nets, and brings him to Mr. Miller."

"Bedad, sir," said one of the men, "we shall never see the money, though we may the fish again."

"Why not, Turk?" said I.

"Sure, he is an Irish fish that's got the money, and he's off to the public-house and spent it by this time, sir. You'll never see that coin again; it's gone for whiskey long ago, sir."

I would now venture to say somewhat upon the reasons which cause a salmon-fishery to be productive or non-productive. It stands to reason that if seeds be not placed in the ground the farmer will not be able to reap any crop; if the game preserver does not preserve the eggs of the breeding birds, he will have no pheasants nor partridges to shoot; so, too, if the water-farmer does not protect the eggs of his water-game, he will have no fish when the harvest time comes. These are facts which are comprehensible to everybody.

And what, after all, is the talisman of success in the management of the Galway fishery? It is simply leaving the fish to follow their own instinct, and instituting a strict system of preservation of the parent fish during spawning-time. Nor, indeed, has the new and hitherto not sufficiently developed science of propagating fish by artificial means (the future results of which will be seen years hence) been neglected, but, on the contrary, greatly encouraged in a most praiseworthy manner.*

Having examined the fish and their habits in the adult stage, and being anxious to examine the actual spawning-grounds, I gladly accepted the kind invitation of a gentleman who knows every inch of the ground to examine the spawning-grounds of the Galway fishery. Here comes in again the idea which is strongly fixed in my mind: that the physical geography of the country has an immense deal to do in the produce of the rivers which run through it. I have now before me a physical map of England, published by Stanford, of Charing Cross (and costing but ninepence), in which the various catchment basins or watersheds of England are marked out; thus we see at a glance what are the elevations of the upper land whence the various rivers flow; and I am now marking out on a large Ordnance map the produce of the rivers, and hope one of these days, when I have my facts complete, to write a paper in

*At Christmas, 1864, I went over to Galway, and Mr. Miller and myself laid down in hatching-boxes more than half a million salmon eggs. The labour we underwent to get these eggs was terrific, and I should have written an account of our proceedings, but that I had been so roughly handled lately in the only quarter where I could at that time write, that I did not care about further annoyance.

proof that geological elevation at the sources of rivers very much affects the commercial returns of the fisheries.

The Galway fishery is especially fed from an immense catchment basin, of which Lough Corrib and Lough Mask form the lowest level. The fish run from the sea into the Corrib; they cannot as yet be certain always of getting into Mask; there they wait in shoals at the mouths of the rivers, and when they get a smell of the mountain-water coming down, up they go, ascending in some instances, as about Maam, almost to the tops of the mountains.

In order, therefore, to visit the upper waters, we (ourselves, not the salmon) first passed the whole length of Corrib, a magnificent lake, about twenty miles in length, and from two to ten in width, filled with the purest water from a limestone formation which has been elevated by geological causes from below. A steamer runs from Galway to Cong, a small village which is situated at the head of Corrib and between that and Mask. I must, therefore, say somewhat of Corrib.

It was an excessively hot morning when we started, the air temperature being 81° , and the temperature of the water 70° ; the water, moreover, so excessively clear that we could see the bottom of the lake almost as clearly as one can see the stones of a pavement from the top of an omnibus. The passage is marked out through the lake by means of rocks covered with white-wash. As we passed along the lake the awful rocks at the bottom gave one what I should imagine would be the appearance of a range of mountains seen from a

balloon, huge boulders rising here and there, the tops of which form the guide-posts to the steamer. Gigantic masses of stone were there, as big almost as an ordinary London house; and by the side of them we saw large plateaus of long flat slabs, between which we could look down upon yawning cracks like the crevasses of the Mer de Glace at the foot of Mont Blanc.

On the steamer we had the good fortune of meeting a gentleman who owned a fine estate by the side of the lake, and also with Mr. D'Arcy, son of the worthy and energetic rector of the town of Galway. Mr. D'Arcy informed me that in the lake were no less than 365 islands, he himself being the owner of several of them, and inhabiting one which is situated just opposite the town of Oughterard. He informed me that, long long ago, some several families, possibly Anglo-Normans, came over to Galway (hence it is sometimes called the City of the Tribes), and did a large shipping business with Spain. And the descendants of these early settlers still remain, and the names of Lynch, D'Arcy, Bodkin, Burke, and Skerrit are still common. These ancient merchants, having so much dealing with Spain, naturally, in course of time, adopted somewhat of the Spanish manners and habits; and, as I walked about Galway, I observed a large number of ancient houses, with courtyards surrounded by high walls; large porticoes, ornamented with stone-work, and guarded with heavy gates, reminding one so much of a Spanish town that one expected every minute to hear the tinkle of a guitar, and a beautiful black-eyed donna to peep through the window. Alas! alas! all this had passed away. I beheld only the features of a poor old Irishwoman, the wife of

some labourer of the poorest class ; while the contending voices of the folks within, engaged in a family row, were anything but guitar music to the ears. These ancient merchant-princes of Galway, who inhabited the houses now so changed in their appearance, were not, however, allowed in these troublesome times to live in peace, for the native Irish chieftains persecuted them to an extraordinary degree. So terrible, indeed, was the persecution of the O'Flaherties upon the Galway inhabitants, that, as Mr. D'Arcy informed me, in former times there was an inscription on the four walls, which inscription was also used as a prayer in the Litany—"From the ferocious O'Flaherties, good Lord deliver us." Mr. D'Arcy pointed me out a gentleman's house situated among the trees, on the borders of Lough Corrib, which was still inhabited by one of the descendants of these ancient Irish chieftains.

As we passed along we observed many boats on the lake, laden with turf, and this naturally led us to discuss the geological origin of bogs. Mr. D'Arcy informed me that not very long ago, when the men were digging in one of the bogs near Oughterard, they found a most curious object, viz., a keg of fossil butter. He told me, moreover, that it belonged to Mr. O'Flaherty, whose house we saw in the distance. Some days afterwards I called upon this gentleman, and his amiable lady was kind enough to show me this curiosity. It consists of a large mass of material, very much the size and shape of an ordinary butter-tub. When minutely examined, I found it to consist of a substance something between common lard and common white soap, giving, moreover, a soap-like touch to the finger. The local story is that

it is a keg of butter, and that from some unknown and inexplicable cause or other it has become fossil. Immediately on examining it I fancied I saw through the whole case, and concluded that it was¹ exactly an analogous case to that described long since by my father (under the head of Fossil Pork), who never, however, published anything about it, though he frequently mentioned it in his lectures at Oxford, of which, I am happy to say, I still possess my own copious notes. In the year 1825 the Rev. Mr. Fazakerley, curate of Swilley, near Bampton, Devon, brought the case forward, and the following is the substance of the Dean's notes upon what was called Fossil Pork.

“About fifty years ago, in digging out a pond at Crewys Morchard, near South Molton, the workmen found a great accumulation of the bodies of pigs that died of the measles, or some other disease, of which a tradition still remains.

“Cattle that die in such cases are usually thrown into a pit together; and, if buried in wet ground, the muscular and all other soft parts of their bodies are turned to adipocere, which is of the same chemical nature as spermaceti, and applicable to similar purposes. Witness the story we hear of the manufacture of candles from the flesh of horses in London. Still more readily does the lard and flesh of hogs undergo this change if buried in contact with water. Thus a friend of mine found a pig completely converted into adipocere, and floating on the mud of the Avon below Clifton. Dr. Beddowes once kept a dead cow in the Cherwell, near Magdalen College, till it was converted to adipocere; and in very wet churchyards human bodies are often

thus preserved for centuries in the state of mummies."

When searching five years ago for the body of the great John Hunter, the founder of the system of modern surgery, whose coffin had remained in the damp vaults under the church of St. Martin-in-the-Fields since 1793, and which was afterwards reinterred with great solemnity in Westminster Abbey, I discovered, among other most curious facts relative to the decomposition of the human body, several examples of this curious wax-like substance, adipocere. The keg of fossil butter from the bogs of Ireland was exactly like what I saw in St. Martin's church vaults: I can only account for its presence in the bog by imagining that at some distant time a pig or a cow had been buried in the bog by some peasant, in future times to be dug up under the form of a "keg of fossil butter." My theory, however, as to the real nature of this fossil butter does not meet with universal approval. [See Appendix.]

On arrival at Cong we were welcomed by Jemmy Burke, the head water-bailiff of that district of the fishery, and having time to spare, visited the ruins of Cong Abbey, and made a sketch of the curious cross upon the grave of Roderick O'Connor, the last king of Ireland, who died in the thirteenth century; the inscription is well-nigh worn out, and it is much to be regretted that some of the authorities of the place do not have it renewed, as the words, "O rare Ben Jonson," were cut over his grave in Westminster Abbey at the kind instance of the illustrious philosopher.

Strange to say, the monastery of Cong is said to owe its ruin to the angling propensities of the monks, for the

story goes that "the proprietor of the place, who was named Richard Bourke, and his wife, being invited to dine at the monastery one day, the lady, on seeing that the ingenious friars had their nets and fishing-rods so contrived that, through a chink in the wall, the end of the rod and line passed from the river outside to the table at which they dined, and that on the end of the rod was placed a small bell which rung whenever the bait was taken or the net was struck by a fish in the river, became so covetous of the place, and the other beauties and useful contrivances belonging to it, that she vowed she would be possessed of it; and she never ceased till she got her husband to yield to her entreaties, and banish the whole fraternity. They were said to be 700 in number when banished."

We took up our quarters in the comfortable and cleanly hotel of Mr. Burke — possibly a descendant of the lord of the manor who turned out the monks. After dinner I turned out, and, finding a lot of children sitting about the cottage doors, proposed a scramble; the stock of halfpence was soon exhausted, so I looked about for some "sweetstuff" shop, but there was none in the place. After a while, however, I found a little *omnium gatherum* shop, where they sold Spanish liquorice, which the children said they liked very well. I bought the whole stock—some ten or twelve gigantic sticks of liquorice—and, breaking it up, scrambled it among a swarm of half-naked, shouting, joyous, healthy-faced little Irish urchins, who fought and scrambled for the liquorice like a pack of hounds worrying a fox. The fun finished, I returned to the hotel, and the landlord showed me to the room in which he informed me, with

great solemnity, that the Lord-Lieutenant of Ireland had slept the night he was refused admission to the Maam Hotel. I turned in, thinking that I should be favoured with dreams of local government, the state of Irish politics, &c. I was not, however, so favoured, for I dreamt I was an oyster, and was left high and dry by the tide, while the ferocious O'Flaherty was about to open me with the sceptre of Roderick O'Connor, the last king of Ireland.

The next morning early we examined the celebrated Cong Pass, a canal cut through the spur of the mountain which separates Lough Mask from Lough Corrib, and upon which my friend, Mr. T. Ashworth, has spent so much thought and capital in order to convert Mask and its tributaries into a vast area of spawning-ground, hitherto unoccupied, available for his salmon. Whether the laudable efforts he has made, and is still making, will ever succeed, time alone will prove. When these chapters appeared in "The Field," I gave a minute description of the Pass and its wonderful peculiarities, and stated the reasons both for and against the probabilities of the salmon going up this pass, but I will spare my readers these details, simply mentioning only a curious incident that took place. The uppermost mile and a half of the pass, the whole length of which I examined with Jemmy Burke, the water-bailiff, took us over as desolate a country as ever my friend Mr. Tristram crossed in his late adventurous journey in the Holy Land.

As we approached the water-gates leading into Mask, standing alone in utter solitude, like the Pyramid of

Cheops amidst the sands of an ancient ocean long since disappeared—for this is the true history of the deserts of Egypt—I fancied I saw something moving about on the gangway of these Lough gates. I pointed it out to Burke, but neither of us could make out what it really was. As we got nearer we perceived that it was a man's head with a cap on—but who and what could he be? On approaching the gates not a living creature could be seen in the fearful solitude of the place, and we were rather puzzled. At last, from behind a huge stone, there crept out a human figure—such an object! all rags, filth, long, unshorn hair, semi-clothed person, and a face not otherwise unintelligent, but still marked with that peculiar appearance which at once denotes a *madman*. I confess I was not over-comfortable at the appearance of this man, and I endeavoured to recall to mind the physiological symptoms as marked in the countenance of a person possessed by amentia, dementia, monomania, general paralysis, &c., as learnt during my medical studies. A glance, however, showed me that this poor fellow was harmless, that he was, in fact, *δελονζιακος*, a scriptural word for which we have no exact equivalent term in the English language. I advanced, I confess hardly without trembling, towards the poor fellow, and offered him the whiskey flask, and followed it up by a parcel of sandwiches which I happened to have in my pocket. For a moment the evil spirit left the poor man, and a beautiful smile came over his face as he snatched what I proffered him from my hand, and eagerly devoured it. His appetite satisfied, I attempted to enter into conversation; but the mind had fled, leaving only a human

form in the most abject state of misery and desolation it is possible to conceive, the only answer to my questions being hideous grins and incomprehensible gesticulations. We moved gently away, but the poor fellow followed us at a short distance, gesticulating frightfully, and talking to himself—both Jemmy Burke and I being prepared to defend ourselves in case of need, which, I am thankful to say, did not take place. At last the poor madman got tired, and, sitting on a rock, shouted and cried till we were a good way from him. Jemmy Burke, my companion, then told me that the poor madman was well known in the neighbourhood; that he lived during the summer months wandering alone amid the desolate regions of the hills and the vast extent of waste land around the Cong Pass; in the daytime he basked in the sun, in the night he betook himself to some hole or overhanging rock, in which he scraped a few leaves and heather, and there made his bed. He obtained his food by occasional scraps which the poor people—all credit to them—gave him at their doors. The desolate and barren scene, the intense silence, the vast expanse of Lough Corrib at our feet, and the poor madman raving behind us, made an impression on my mind never to be obliterated, and realised the incidents which must have taken place on that remarkable occasion when, by the immediate operation of Divine power, the “unclean spirit” was in a moment driven out from the man, “who always, day and night, was in the mountains and in the tombs, crying and cutting himself with stones.”

The Cong Pass examined, we took a car for Hollymount Farm, occupied by Mr. Maxwell, where there is a little stream* proceeding from a spring which empties itself into the Ballynrobe river, which river runs direct into Lough Mask.

It is at this locality that the experiment of hatching salmon by artificial means has been instituted by the proprietor of the Galway fishery, with the idea that no chance should be thrown away of utilising, even in spite of the difficulties of the Cong Pass, the now barren 22,000 acres of Lough Mask, and one of the chief objects of our journey was to examine how matters were going on with the young fish.

In the spring of 1863 an artificial watercourse, eighty yards long and four feet wide, was cut parallel to the natural stream, and a hatchway placed at both ends to regulate the flow of water; this empties itself into a pond about twenty by thirty yards. The bottom of this watercourse being covered with gravel, upwards of 300,000 impregnated eggs were brought fourteen miles from Clare, Galway, and deposited on the gravel. It became my task to ascertain, if possible, what the practical result of this experiment had been. As we walked towards the pond Mr. Maxwell informed me that "there was not an egg put alive into the brook but that had come out a fish, and there were still a great number of fish in the pond, although a few had escaped into the ditch leading down into the river." As we walked along this ditch I observed an enormous number, not of salmon, but of "tittlebrats," which are also known here as "Jack Sharps" and "Lebians,"

* The Jena.

and every here and there, few and far between, a young salmon or two. Arriving at the pond, I requested my companion not to go near till I had crept upon hands and knees and examined the fish before they had been disturbed or frightened. From the account I had heard from Mr. Maxwell, I had expected to see a very large number of young fish swimming about in the pond. I was therefore very greatly disappointed to observe very few fish indeed in any part of it. It must be remembered that 300,000 eggs had been placed down, and even supposing we knock off half this number for natural losses and death, there ought to be 150,000 fish remaining.

I was positively certain (my eye from considerable practice being accustomed to arrive pretty closely to the number of young fish in a mass), that from what I saw—and I had both my eyes as wide open as the eyelids would permit—there were not above a thousand or two of young salmon fish in the pond, if so many. What, then, had become of them? Enemies of some kind had evidently devoured them. I asked Mr. Maxwell if he had ever found any dead fish in the pond, and he said, “Very seldom indeed, but he had often observed fish swimming about with a white speck at the end of the tail.” Although it was a very bright clear day, nothing could be seen moving in the pond but a few little salmon.

Being determined, however, to find out what the enemies were that destroyed these fish, I fastened a piece of muslin on to the end of the landing-net, and drew it along sharply under the edge of the grass and weeds which overhung the margins of the pond. While doing this I ascertained at once that the bottom of the pond was covered with mud, a fact in itself militating

against the well-being of young salmon. In this mud my net showed in a few seconds that there existed hordes of hungry-minded, bloodthirsty ogres, which would devour the young salmon like wolves let loose on a flock of lambs. As I took my net out of the water, I found that the result of my haul was a number of great black water-beetles, principally *Dytiscus marginalis*, of which Mr. Wood writes in his "Natural History," vol. iii. page 464: "The larva of the *Dytiscus* is a terribly-ferocious creature both in aspect and character. It inhabits the waters, and is a very hyæna in the terrible grasp and power of the jaws. The perfect insect is quite as voracious, and, when a number are kept in a single vessel, they are sure to attack and kill each other. No one who cares for the animated inhabitants of his aquarium should permit a *Dytiscus* to be placed among them, as a fox makes no more havoc in a chicken-roost than a *Dytiscus* in an aquarium. The courage and ferocity of the creature are so great that it will attack insects much larger than itself, and not even fish can escape the jaws of this insatiable devourer."

I called to my friend, who was waiting the result of my investigations.

"There," said I, pointing to the contents of my net, "are the horrid rascals that have been doing you hundreds of pounds' worth of mischief this last season. The fish which you hatched with so much care and expense have served only one purpose, viz., to feed these horrid blackbeetles; and a nice time they have of it—plenty to eat, and nothing to do!"

No wonder Mr. Maxwell had seen several fish with white marks on their tails—the wounds left by their

cuirass-cased enemies, from which they have been fortunate enough to have escaped by speed of fin. And no wonder, again, that he never saw a dead fish: there are too many hungry beetles in this pond ever to allow such a precious morsel as a dead fish to escape their voracious maws.

"Can you show me that this is clearly the fact?" said my friend.

At that moment a huge black *Dytiscus* came swimming past with all steam up, and his oars going like those of the winner of a skiff-race, for this old "soldier" evidently was aware, from the mud and disturbance that was going on in the pond, that something was wrong, and he must look out for himself at once. I caught him by good luck with the net as he passed by, and sent a boy back for a preparation bottle, a number of which I always carry with me. I put my water-hyæna into a bottle. "Now," said I, "if my theory is correct, that fellow—although he is in captivity, and a prisoner—will fly at a little salmon put in to him, just as surely as a terrier will fly at a fox when he is run to earth by the hounds." So I caught a little salmon and put him into the bottle.

Spying him from below, the beetle rose straight up at the unfortunate little fish, making direct for him—that peculiar savage, determined rush that one sees when a bulldog is slipped at his enemy. In an instant the beetle rose above the salmon, and then pouncing down upon him as a hawk upon an unsuspecting lark, dug its tremendous, scythe-like, horny jaws right into the back of the poor little salmon. The little salmon—a plucky little fellow—fought hard for his life, and swam round

and round, and up and down, hither and thither, making every effort to escape this terrible murderer, who stuck close as wax to his victim ; but it was no use, he could not free himself from his grip ; and while the poor little wretch was giving the few last flutterings of his tail, the water-beetle proceeded coolly to pick out its left eye, and to devour it at once with evident gusto.

I must say I was much amused to see my friend's face while the performance between the salmon and the beetle was going on. First a flush of surprise stole across his face ; this gradually warmed up into a glow of, I may say, angry disappointment, and he and I, joining hands, danced round the bottle, which I placed on the top of a gate-post, in order to work off our emotions, shaking our fists and vowing vengeance against the whole race of blackbeetles, and particularly the happy family of them that had taken up their quarters in the Hollymount pond, and had eaten up his 200,000 innocent young fish.

The chief murderer who had committed the deed before our eyes, and which we had in close custody in the bottle, we at once condemned, by drum-head court-martial, to execution. It was suggested that a wee drop of genuine potheen whiskey would do his digestion good after the capital fish dinner he had just taken. While, therefore, our friend was still engaged in devouring the murdered innocent, we gradually poured the water, which formed his dining-room, out of the bottle, and then gradually filled it up with a dose of very strong whiskey, out of a drinking-flask. As the whiskey was gradually added to the water, the beetle became uncomfortable, but still he did not let go the body of his victim. "More,

more !" cried my friend, "give him more whiskey ; he can't live in that, the villain !" So we filled up the bottle to the top suddenly, and then it was the beetle's turn to dance and cry "peccavi ;" for as the whiskey got into his head, and he was obliged to swallow it *nolens volens*, he flung himself madly about the bottle in all directions, fizzing and spluttering like a cracker let off by a street boy on a Guy Fawkes night ; and at last, finding himself getting faint, he turned up the white of his eyes and sank down to the bottom alongside the body of his murdered victim. This fellow is now a famous beetle, and has been nicely "set up" in a preparation bottle in company with his victim. All we want is an heroic poem, a match to Homer's *Βατραχομυμαχία*, "Battle of the Frogs and Mice," describing in equally glowing colours the battle of the "Beetle and the Salmon."

What, then, was to be done to save the lives of the few little salmon that still remained in the pond ? Why, let them go, of course. We therefore opened the hatch of the pond, and away they went in continuous shoals—tails foremost, mind—glad enough, doubtless, to get out of their prison-house. For it would, indeed, have not only been impolitic, but even cruel, to allow these poor little wretches to remain, after what we had seen, in the pond to be devoured by the blackbeetles, like a lot of helpless rats by dogs in a London rat-pit.

As the water receded and the pond became dry, I waded into the mud to assist a few little fish that had got stuck fast among the weeds. In so doing I discovered that this mud was not only a perfect hotbed of these carnivorous blackbeetles, but that every here and

there jumped up a specimen of a kind of fresh-water. "great sea-snake," as described by the Yankees, viz., the larva of the dragon-fly, a terrible enemy to these little salmon. So many and various, indeed, were their enemies that I much wonder that any of the 300,000 little fish ever survived at all. We had our vengeance on all these water vermin by letting the water entirely off from the pond and allowing them to meet the fate they deserved, and swim, if they could, on to dry land.

What, then, is the moral of this sad story of the murdered innocents? It is simply this, that ponds, as a rule, are very bad situations in which to place young salmon. In the first place, a young salmon is not naturally a pond fish. If we wish to see them in their natural habit, we search for them in rapid-running shallows. Why, therefore, put them in a pond where they have to encounter the attacks of water-beetles and other creatures which can never reach them in their natural growing streams? I assure my friends that I think the pond system is a mistake, and that they had much better transport their young fish, when the umbilical bag is nearly absorbed, into shallow streams and rivulets where the fish are found naturally, for, depend upon it, these young creatures know better what is good for them than we do, and they will always do better in shallow running streams than in ponds.

We had more of the breeding-ground of the Galway fishery to examine, so taking a car, we started *en route* for Maam. However much travellers are indebted to the Ordnance maps of Ireland for information as regards localities, they must not judge of the sizes of places by

the size of the letters which denote their position. Thus, for instance, I find that the word Ballynahinch takes up exactly an inch on the map, and this is equivalent to four statute miles. Again, the word Maam is half an inch long. If, therefore, the places themselves bore any proportion to their names on the map, both Ballynahinch and Maam ought to be very large places; whereas at Ballynahinch I could not discover even a village, and Maam turned out to be simply one house and a wilderness. I was sitting writing at my notes on the car when the driver pulled up at a little bit of a public-house by the roadside. I did not even attempt to get out of the car, thinking we had merely stopped for a few minutes to give the horse some water. Much was my surprise, therefore, when my friend said, "Jump down; this is Maam, and we must *stay here all night*; so make yourself contented!"

A friend of mine has lately taken a house in the country, so far from civilization that he tells me he is obliged to give even his chimneysweep a bed. Maam is even worse than this, for my friend's bailiff had to send forty miles for a pair of boots; and the landlord, having no bread or whiskey in the house on our arrival, was obliged to send a man and dog-cart twelve miles to the baker's, and twelve miles home again, to get supplies for us. There is in my mind a standard rule, viz., that no place on the earth is so stupid or so desolate as not to afford information or instruction of some sort or kind, if one only knows how to hunt about for it. It has been said that there is but one rule without an exception, and that is, "a man must be present while he is being shaved." Maam is no exception to

my standard rule, so I set to work to pick up what I could of its history, products, and local traditions.

Though almost the Ultima Thule of civilization, Maam has its charms and its history; for was it not at Maam that the Lord-Lieutenant himself, being refused a night's lodging at the hotel—(what a difference between this and the Westminster Hotel!)—was obliged to go on to Cong at once with tired horses? Was it not at Maam that the murder of a poor woman was committed not very long ago? The poor creature and her husband had made a little money in Australia, but such was the *amor patriæ* in her breast that she returned all the way from that distant land to this winter-clad and desolate Maam. A few weeks after her arrival a brute of a fellow knocked the poor creature on the head as she was sitting alone in her cottage. I regret to say the rascal escaped justice, witnesses being unable or rather unwilling to appear against him. And is not Maam a pocket Switzerland, whose glorious mountain-tops pour down crystal streams, the nursery and breeding-ground of salmon-fry innumerable?

How it is that salmon understand that, in order to bring their eggs into young fish, a shallow running stream is necessary, I know not; anyhow, they will, if they can, choose mountain streams in which to deposit their eggs. When I examined these streams I found them literally swarming with young fish, showing that the water-bailiff, Martin Walsh, had done his duty properly towards his master, even though he had to remain out night after night, behind some turf-bank watching for poachers. He tells me that in the winter time the streamlets are quite black with spawning

salmon, and judging from the numerous nests which I saw, I can easily believe this to be the case. Water in these streams is sometimes excessively cold, and, doubtless, the salmon are sometimes prevented from spawning by the excessive cold, for Mr. John Miller informs me that frost hinders the spawning fish in a peculiar way.

A salmon nest, as properly constructed by the parent fish, generally consists of a heap of gravel about two yards long by two yards square, loosely piled together. The frost puts the salmon off their beds. The fish cannot retain their eggs longer than a certain time, and if hindered from the operation too long they will deposit their eggs in one solid lump, like a bunch of grapes, when, of course, they perish from want of proper impregnation and from being overcrowded. I do not believe that frost is very injurious to the eggs themselves, if they have been properly placed in the nest. The Australian experiments have shown that eggs can be preserved in ice for a much longer period than is likely to take place in their natural streams, and at this moment can be seen in fish-hatching troughs, at the Royal Horticultural Gardens, a number of young salmon—brothers and sisters to those sent to Australia. These are as healthy, strong fish as one wished to see; if anything, stronger and better specimens than those which, when in the egg state, were never in ice at all. Precocious fish, who do not take sufficient time to hatch out from the egg, are like precocious juveniles of our own race, who come out of training too quickly, and begin their journey at a pace “too fast to last.”*

* That ice will preserve animal substances for a very long succession of years without decay, if only these substances be not exposed to the

The salmon at Maam, I am convinced, from what I saw, sometimes make a mistake in building their nest too high up the mountain streams, for if there is too much water at spawning time, the fish are induced to go so high that their eggs are left dry as the water recedes. We must, I think, put up some sign-posts to inform the fish of this danger to which their eggs are liable, only that I fear they would not be able to read the notices unless they were written in Irish characters; and where is the man to be found who can write Irish?

As I was wandering up the stream with the water-bailiff, I was much struck with the pasteboard-like appearance of the mountains around me. The edges were as sharp as though cut out with a saw from deal boards, like the snow-capped summits of the Alps which I can see every morning from my dressing-room in Albany Street, amid the fastnesses of the now desolate Colosseum Royal, Regent's Park. Alas! alas! no chamois or marmots can I see on the summits of these Colosseum Alps, the sole inhabitants of these London mountains being a colony of squalling cats of divers

air, has been exemplified by a story an Oxford friend has told me. When wandering this summer along the bottom of the Glacier des Boissons, in Switzerland, they discovered a portion of human hair and a bit of a man's dress sticking among the ice. He and the guide set to work and examined the ice all around; and shortly they discovered a human thigh buried in the ice; upon knocking this out of the ice the flesh was seen to be in a perfect state of preservation, but exposure to the air soon caused it to decay. They also found a leathern purse, with sixteen francs in it, the money bearing the portrait and date of the first Napoleon. These were the relics of an expedition which was lost some *forty* years ago, an avalanche destroying nearly the whole party, whose remains, entombed in ice, have in this space of time been carried from the top to the bottom of the glacier.

colours. I am thinking of arranging terms with the present proprietors of these Alps for a day's cat-shooting, if we can come to terms.

The air in the valleys between the Maam mountains is, so to speak, ponded air, being, when I was there, as unruffled as a mill-pond on a hot July day.

"There ought to be some fairies about here," said I to Martin.

"Fairies! yes, your honour. I have never seen one myself, though I have been always in dread of them. My father saw one once as he was coming home at night among the mountains. He stood before him in the middle of the road; the horse he was riding saw the fairy first, and stood up on his hind legs, and, shying at the fairy, passed him on one side, and galloped straight home. My father was in bed for two months, and at last a priest came and made a gospel for him, and he got well. The fairies are like little boys, not badly dressed. They come down at night from the hills and play. They never speak to anybody, and run away directly they are seen. I think that the fairies are as much in dread of the men as the men are of the fairies; but anybody who sees them is sure to have bad luck soon."

It is very curious how this idea of fairies and witches is still prevalent, even in districts not far from London. A clergyman, whom I met when staying at the Bishop of Oxford's in Sussex, tells me that some of his parishioners, in a village underneath the lone and bleak Sussex downs, believe in witches even now, and that if a horse when taken up in a morning from a field be unable to do a day's work, they say the fairies have been riding him about all night. The origin of this tradition is, I

believe, that in former times a good deal of smuggling went on at night, and the smugglers used to take the farmers' horses out of the field, and use them in the night. The existence of fairies was a very ready mode of accounting for horses being fatigued. The manes, again, of many of the semi-wild colts turned out in the New Forest are often found knotted and matted together in a complicated way, and the story is that their manes have been twisted together by the little fairies in order to enable them to climb up on the ponies. These matted manes are known, I believe, by the name of the fairies' bridle.

Between eleven and twelve o'clock of the night we spent at Maam, I took a solitary walk to see if I could come across some of these mountain fairies. It was a most lovely night with beautiful moon, and the lake as still as glass.

The moon,
Full-orb'd and breaking through the scattered clouds,
Showed her broad visage in the crimson east.

I then looked everywhere about, but could see no fairies—it was possibly the least bit too cold for them, for I know they love the warmth; however, on turning a corner I saw a curious sight. In an angle of the lake, underneath the bush, something or other was moving round in the water very fast, describing circles of about a foot in diameter. There were, I suppose, twenty or thirty of these circles, which crossed and recrossed each other at various intervals. The moon caused these circles to appear like rings of silver, and they were certainly very mysterious and beautiful in the calm stillness of the night. I tried very hard to creep up

close to these circles, as I conceived it possible there might be water fairies as well as land fairies, and that a party of these were out at play. The shadow of the bridge falling on the very spot, however, prevented me from seeing anything whatever. My belief, however, is, on considering the matter carefully, that the circles were simply caused, not by fairies, but by perch at play, swimming round and round with their mouths on the top of the water, either for food, or else for mere sport, for I don't see why fish should not have their "little games" like every other living thing. A lively imagination might easily have conformed these creatures into fairies "at play:" if they really were fairies they must have been Naiades, or water fairies.

The fairies which Martin Walsh's father saw were probably Oreades, or mountain fairies. I have told Martin I will give him a large reward if he can get me a "specimen," live or dead, of a fairy; and I recommended him to adopt the new painless trap* invented by the Rev. Mr. Baker, who lately gained the prize at the trap show, as one would not like to hurt the poor little fairy when caught in a trap. What bait one would put in for the little creature I know not: if they be little boys, I think sweetstuff in some form or another would be the most attractive.

What becomes of the fairies in the winter, I am unable to say; they probably, however, hybernate like dormice, and should any of my friends find a torpid

* I advise everybody to use this trap: it is most humane, and was the successful competitor in the "Trap trial," instituted 1864, by the Royal Society for Prevention of Cruelty to Animals. It is called the India-rubber gum trap. This trap is registered.

fairy snugly ensconced in winter quarters amongst the dead and decayed leaves, in some hollow tree, either in their parks, or else in the open forest, I should feel obliged if they would pack him up carefully in a snug box of dry hay, and send him to me to be thawed into life, examined, and described.

If space would allow, I should have liked to have written much more, both about the salmon and about other matters* — curious, though not so important — that came under my notice in Ireland. I will, however, with the reader's permission, content myself with placing on record but one or two more facts which I learnt on my journey; thus, for example:—At and about the head of Lough Corrib are found specimens of the large fresh-water mussels. The head-quarters of these seem to be Oughterard. On our arrival at this pretty little place we were greeted with volleys of "Yer honer's welcome!" "Long life to yer honer!" from one of the strangest characters I ever beheld.

Irish beggars are not remarkable for the neatness and cleanliness of their personal garments, but our new friend, Jemmy the Pearl-catcher, was a strange mixture of cleanliness and dirt. His garments were as scanty as they could well be to hold together, but perpetual ablutions in diving into the lake rendered his presence not quite so undesirable as that of some members of the family of the great unwashed. Jemmy, I observed, wore a shoe on one foot, and *no* shoe on the other. He

* My notes on the cultivation and natural history of oysters will be given in the new weekly journal of practical natural history, "The Land and Water." Chapman and Hall, Piccadilly.

told us that "one foot was a gentleman and the other a blackguard; one foot was the Catholic foot, and the other a Protestant foot." The Catholic foot was the one that had the shoe on, and enjoyed the proper privileges of a foot, whereas they were denied to the Protestant foot. Jemmy's proper occupation is a buyer of pigs, as he is supposed to be one of the best judges of pigs in the country. One day when overcome by undue potations after a bargain *in re* pigs, somebody tried to persuade him to become a "Jumper," that is, to turn his faith in matters of religion, and he was so far persuaded that he actually was induced to place one foot inside a building devoted to the Protestant persuasion. He was so angry with this foot for becoming a "Jumper" that he vowed vengeance upon it; he therefore has punished it ever since by never allowing it to wear a shoe or stocking, and by putting it out of the bedclothes at night, "in order to allow it to perish." We expostulated with Jemmy upon thus torturing this poor Protestant foot, and gave him some money to buy a shoe and stocking for it, in order that it might have equal advantages with its brother foot of the opposite persuasion; but I much fear that the foot has not yet benefited by our good wishes, for on receiving the money Jemmy was observed to *look into* the door of the shoemaker's shop, but to *go into* the door of the public-house, from which he shortly emerged in such a state that neither of his feet, either Protestant or Catholic, could carry him straight along the street.

Jemmy gets his living by collecting pearls from the mussels which abound at and about the town of Oughterard. He is like the "medicine man" among

the Red Indians, very mysterious in his movements when he goes out to look for pearls, his principal enemies being the small boys, who, could they find out where Jemmy's mussel-preserves were, would come and poach upon what he considers his own rightful property, and, taking his pearls, would injure his business in the pearl trade. He told me that he knew, when a mussel had a pearl in her, without opening it, because she sits upright with her mouth in the mud, and her back is crooked, that is, it is corrugated like a cow's horn, a fact which he demonstrated to me from a number of mussels which he had in the basket. He opened one of these crooked-backed mussels, and sure enough Jemmy was right in his diagnosis, for there was a pearl in it a little larger than a turnip seed. He then mysteriously produced from the lining of his very old shabby hat—at which I think a scarecrow would turn up its nose—a very dirty bit of rag, and in this rag were two of the most beautiful pearls I ever beheld, which, if properly set, would form ornaments fit for the locket of any lady of her Gracious Majesty Queen Victoria's court. Such pearls as these Jemmy said he did not get every day. It was a very rare piece of luck to find them, and they were generally found in mussels which lived in such deep water at the edge of the Lough Corrib, that, having no boat or dredging apparatus, he is obliged to go into the water, swim over to the place where the pearls are, and then keep on diving down for them like a cormorant fishing among a shoal of herrings. Sometimes poor Jemmy has a run of bad luck. Last winter he was nearly starving, and he did not know what to do, for none of the mussels he opened had any pearls in

them, and nobody wanted him to buy any pigs. When matters were at their worst, he saw four mussels with their noses out in the mud, a sort of family group; he went into the water and brought them out. When he opened them, to his great delight, one of them had two pearls in it about as big as a boy's marble; he sold them at once, and they fetched him 2*l.* 8*s.* No wonder, therefore, that Jemmy does not like the boys to know where his favourite mussel-beds are situated.

Jemmy haunted us wherever we went, even up to the last minute of departure; and as the car drove off, he held up his *Protestant* foot and waved it about in triumph in the air, as an elegant mode of wishing us a last adieu to Oughterard. Though this poor pearl-catching Jemmy is a dirty, ragged, and, I fear, somewhat intemperate individual, yet, after all, he seems to be a good sort of fellow, and deserves to be encouraged in his pearl-finding operations by salmon-fishers as they pass through Oughterard on their way to the far-famed salmon streams of Ballynahinch.

When we arrived at Ballynahinch, we were most hospitably received at Ballynahinch Castle, by our friend, Mr. Robinson. It was here that the celebrated Colonel Martyn lived, who boasted that his park gates were thirty miles from his door, and who, or else one of the family, I believe, was the gentleman that brought a motion into the House of Commons: motion made and question put, "That every quart pot should hold a quart." It was, too, I fancy, this same Colonel Martyn who was called "Cruelty Martyn," a most undeserved name given him because he, being a most humane man, was one of the most energetic promoters of the Society

for *Prevention of Cruelty to Animals*. Feeding in front of the house I met, face to face, a four-footed beast; on seeing him, I took off my hat and made him a low bow. "Little, my poor little hungry beast," said I, "do you know the very ancient and noble family of 'Bos' that you represent! for most assuredly you carry the family likeness strongly impressed on your face and on the fashion of your horns. You must, indeed, be a direct descendant of *Bos longifrons*, now so long extinct in England. Long, long ago, the ancient Britons herded large numbers of your ancestors, and many a noble bull of your family was pole-axed at the sacrificial altars of the officers of the Roman legions, when quartered on the high grounds of England; for do not the very skulls yet remain, with the mark of the Roman axe impressed on the forehead by the Roman priest? Long may you live to enjoy the luxuriant pastures of Ballynahinch! but if your owner does not, on your decease, give me your head, to hang up in my museum by the side of the semi-fossil skull of one of your ancestors, I shall never forget or forgive him."

I learnt, among many other things, from my friend, Mr. Robinson, a very remarkable fact relative to two curious diseases that attack the cattle which feed on the hills at and about Ballynahinch. These maladies are locally called the "Pine" and the "Cripple;" and although we may often foolishly laugh at popular names for diseases, whether of man or beast, yet it often happens that the *vox populi* gives one really a more clear and distinct notion of the nature of the disease than *vox medici*—though it may be heresy on my part to be of this opinion.

Not long ago, when staying at a village in Yorkshire, I was attracted to a pig-stye by the agonising cries of a poor pig. I asked the man who was digging potatoes in the garden what was the matter. He told me that he was "pinning the pig," a humane process, which I found consisted in giving the poor beast nothing whatever to eat or drink for some eight-and-forty hours previous to his being conducted to the pork-butcher's private apartments. I asked the man how *he* would like to be pined. He said he should not care about it, particularly if it was in Christmas-week; but if the *pig* was pined he would be saved so much trouble when he came to dress the animal's carcass. Alas! for the laziness of mankind.

The "pine" in the Irish cattle is not produced by the cruelty of their masters, but from another cause; for the fact is that beasts which live near the sea-shore, and which eat the seaweed, and also the grass on the mountains, which is impregnated with salt from the sea, are found to fall away to perfect scarecrows, or, as a very thin man was once defined, to become into such excellent condition, that he was "fit to fight the living skeleton."

The "cripple," on the contrary, occurs in cattle which are fed on the mountains away from the sea, and the peculiarity of their disease consists in very great enlargement and swelling of the joints, which crack like a joint of undressed veal when pressed with the finger; the bones themselves, however, do not seem to be in any way affected, except in old-standing cases. This cripple disease occurs in weather when damp misty days are succeeded by cold winds, and always on

the hill-side. I have not had an opportunity of examining a cripple, but I am nearly sure that this disease must be nothing more nor less than chronic rheumatism of the synovial or lining membrane of the joints. It is curious to remark how a remedy for these two diseases is naturally provided, and how a little knowledge in this matter is a most useful, instead of being a most dangerous thing. The cripples are transferred to the sea-side, where, in an amazingly short time, the swelling of the joints disappears, and the beast recovers its condition. I fancy that this is to be accounted for by the quantity of iodine and other marine salt which the creature takes into its system when eating the seaweed. The cattle affected with the pine are, on the contrary, transferred to the mountains, where, owing, I suppose, to their getting grass which contains the ingredients in which the seaweed is deficient, they speedily recover. (See Appendix.)

I feel it now time that I concluded this series of notes upon what came under my observation during my visit to Ireland. Believe it, reader, when I say that I have endeavoured in all I have written simply to record facts and relate anecdotes, which may if possible be applied to practice for the benefit of the public in general.

We are, depend upon it, getting to a period when natural history is assuming a new and very important feature, viz., its application to practice, especially as regards the great questions of the fisheries, both rivers and sea. It takes as much time to examine the habits of a tittlebat as it does to examine the habits of a

salmon, though one is useful to mankind, the other perfectly useless; and it takes as much time to write a label for a hippopotamus as it does for a mouse.

Why, therefore, should not our friends, residing in the country, pay as much attention as possible to the habits of really useful creatures? for we little know what secrets Nature may have in her innermost laboratory which she may possibly disclose to those who patiently and humbly ask her for information.

The true secret of happiness is constant employment, and what can be more delightful than the examination of the wondrous works of Nature? What, again, more in accordance with the social nature of man than friendly converse and argument with one's fellow-creatures on the high change of mental ideas, remembering always the motto that ought to be emblazoned on our standard, "Peace and good will towards men!"

THE WILD BEAST SHOWS.

LIONS.

THE grand but startling roar of a Lion thundering down the avenues of the Long Walk at Windsor, one dark November evening,* gave notice to the staid citizens that the African Lion had come to pay a visit to the stronghold of the British Lion. The next day's sun dawned upon an eruption of yellow vans, which had sprung up amidst the nettles, weeds, and brickbats (the crop of that industrious farmer "Chancery"). I lost no time in paying a visit to the Lion which I had heard roar the night before, and which I found in the erratic zoological gardens, under the management of Edmonds, late Wombwell. Nearly half a century ago, Mr. Wombwell started the idea of travelling menageries, and ever since, like the Wandering Jew, his caravans have been on the march from town to town, from fair to fair.

The establishment, then at Windsor, consisted of fifteen vans, in which the dens are built. When they

* I was at this time, November, 1858, quartered at Windsor with my regiment, the 2nd Life Guards, of which I was at that time Assistant-Surgeon.

arrive on the exhibiting ground they are formed into two lines, with the long elephant van at one end and the "pay here" van at the other, the whole being roofed over with canvas. Between thirty and forty men are employed as keepers, &c., and forty-five horses are attached to the establishment to drag the vans; many of the keepers have "apartments" in the vans behind the animals—one man having for his next plank neighbour the hyæna; another the bear, who "rattles his chain all night;" another the lioness and her cubs, which latter cry as loud and as continuously as biped babies, &c. The expenses, as may be imagined, for food for the animals, &c., are heavy, and amount, as I was assured, to nearly thirty pounds a day: and yet the concern pays a fair profit.

All the animals are carried in the vans, except the two elephants, Ackberkahn (the male, aged six) and Abdalla (the female, aged ten); these intelligent beasts walk, but yet in such a manner that they shall not exhibit their huge carcasses for nothing. Accordingly a van twenty-seven feet long is provided, the bottom of which comes out, and the elephants march away famously, their huge feet only being exposed to the public; this acts as an advertisement, and makes the folks anxious to see the rest of their bodies. They "can" march twenty miles a day, but ten miles is about their usual day's journey. These elephants are wonderful performers, and after much time, trouble (and, I am glad to say, kindness), Abdalla has been made to learn to stand on her head—positively on her head—the point where she touches the ground being the point just where the trunk is attached to the skull, her hind feet

being raised about three or four feet from the ground. She will also rear upright on her hind legs, and place her fore feet on her trainer's shoulders; but she remains in this position only for an instant, her weight being so great. The two elephants also stand upon tubs a little larger than buckets, balancing themselves on two feet, and it is quite wonderful to see how neatly and carefully these great brutes dispose of their cumbrous feet, so as to poise their unwieldy bodies.

I was informed that in order to teach these elephants their performances, "it is only necessary to *give them the idea* of what they want them to do, and that they will *practise* what is taught them when alone." When not performing they stand importunate beggars, thrusting their long trunks among the spectators for halfpence, which they immediately spend at a cake and nut-stall within reach of their trunks; they place their money on the stall, and receive the eatables in return. I doubt much whether they can distinguish between a halfpenny or a penny, for in most instances they made very bad bargains with their coppers, getting small halfpenny or pennyworths either. When not served immediately, they ring a bell to call the attention of the black man who keeps the stall, and let him know they wish to make a purchase.

These elephants are worth from 600*l.* to 800*l.* each, according to the market, whether "there were many elephants in the country or not." I saw a small elephant the other day at Mr. Jamrach's, in Ratcliff Highway, about as big as an Alderney cow, the price of which was 500*l.* It is now sold to the Zoological Gardens at Turin.

Mr. Edmonds had a very fine one-horned rhinoceros, which has been in the show twenty-one years, and which cost 1400*l.* at the sale of the animals at the Manchester Zoological Gardens: he always rides in his van, being a valuable animal and worth his carriage. Formerly they had a giraffe, but it died; and in its place they have four "war camels from the Crimea." These form part of the triumphal procession when it enters a town. Two of these camels are walked round and round inside the show, and people allowed to ride, three or four at a time. I had a ride to myself, but found it most difficult to keep my seat: I can compare the motion, especially when trotting, to nothing except what I imagine would be the sensation of riding on the end of a long scaffold-pole, projecting from the tail of a cart.

I have since heard of a gentleman who was thrown off a camel in Egypt, and so seriously injured that he died of the accident.

Mr. Edmonds has a very fine collection of lions, both Asiatic and African, most of them young. He has also a magnificent lion and lioness with cubs, which were born at Southampton. Outside the show is a magnificent portrait of the big lion, painted on a panel. With this not even Mr. Ruskin, I think, could find a fault—that is, if the perfection of painting is the faithful representation of nature. Inside the caravan one sees the "Lion-slayer," who goes into the den with seven or eight of the young lions, and makes them jump over sticks, through hoops, and perform other feats of activity. I was informed that it is "much easier to train a 'forest-caught lion' than an 'exhibition lion'"—a fact which is very curious, and much surprised me, but

a practically-ascertained fact for all that. The "Lion-slayer" uses a mixture of kindness with severity (the former predominating) in training his animals—handling and the voice doing much; the animals did not show in their countenances the least fear of their tamer, which they would have done if unkindly used.

It is a remarkable fact that lions in travelling menageries are generally in a much better state of health than those which spend their lives in stationary cages, such as at the Zoological Gardens. A very extraordinary malformation or defect has frequently occurred among the lions born during the last twenty years in the Gardens. This imperfection consists in the roof of the mouth being open—the palatal bones do not meet; the animal is, therefore, unable to suck, and consequently dies. This abnormal condition has not been confined to the young of any one pair of lions; but many lions that have been in the Gardens, and not in any way related to each other, have from time to time produced these malformed young, the cause of which has hitherto been never explained.

The cubs, I understand, born in travelling menageries are not so much subject to this infantile deformity. Lions, dead or alive, are always valuable. All museums take lions, some the skin, some the skeleton, some the viscera. He is a good typical beast. When dead a lion is worth from 2*l.* to 20*l.* A live lion is worth from 50*l.* to 350*l.* for a full-grown fine beast. Sometimes the market is glutted with lions. They mostly come from Algeria; the lion hunters shoot the parents, and send the cubs over *viâ* Marseilles.

PERFORMING LIONS.

IN January, 1861, the London streets were placarded with large diagrams, representing the "Lion Conqueror with his trained group of Performing Lions." They were on exhibition at Astley's Theatre, and of course I at once paid them a visit. Many of my readers recollect Van Amburgh and his cageful of lions, but I think Mr. Crockett and his magnificent beasts was a far better performance.

Whereas in olden days coercion and force seemed to be the order of the day, we now see that these powerful representatives of the cat tribe are amenable to kind treatment and firmness; the days of hot pokers and carters' whips are passed, and a common jockey's riding-whip is the magic wand by means of which the lords of the forest are subjected to the will of a man whose physical strength to theirs is as that of a mouse when in the clutches of our domestic puss.

I hear that the old-fashioned way of causing lions and other wild beasts to have a wholesome dread of a hot poker was to allow the animal to burn himself once with a red-hot poker. The lion-tamer then covered the end of a stick with red sealing-wax, and this the animals carefully avoided, thinking it was a red-hot poker.

Of course, without some little story, Crockett's performing lions could not be effectively brought on the stage. When I came into the theatre, there was a beautiful young lady on the stage, in great distress at being lost in a desert. To add to her alarm, the lions were heard roaring in the distance; at that moment the "Lion Tamer" appears from one side of the stage, and from the other a very fine, black-maned African lion, free and unchained, bounds out with those beautiful elastic springs so peculiar to his race. For a moment we doubt what is going to happen; when the ungallant lion, disregarding the beautiful princess, raises his huge body up into the air, and falls upon the neck of his master, whose head he considerably overtops when standing on his hind legs. In this seeming affectionate embrace the two—the lion and the man—walk round the stage, giving time for the princess to run for it. The Lion Tamer all this time (I observe through an opera glass) has a strong hold on his pet by means of a strong collar round the neck and under the hair of the mane, so that the beast cannot well get loose if he tried. The lion's face on his master's shoulder is most absurd and comical; it is like that of an enormous cat in doubt whether to be angry or pleased; but the weight of the beast must be tremendous, for Crockett had enough to do to hold him up, and he seemed right glad when the curtain began to fall, and he could let the lion down in his natural position.

Then comes more of the story, in which one "Rung Jung," a comical, half-witted character, is caught, and told with solemnity that he shall be devoured "in the den of famished lions," upon which the unfortunate

excuses himself, "as he is all skin and bone, and the lions will not enjoy him," and begs "time to get fat."

The next scene is the lions' home in the desert; and when the curtain draws up we see the lion asleep on a bank, his master by his side. The "terrible" effect is rather taken off from this scene when we see the poor, good-natured lion, blinking, with half-closed eyes, at the glaring footlights, and trying to stare at the people beyond, the tip of his tail all the time just moving gently up and down, like that of the cat when warming herself before the fire.

The climax comes when the Rajah commands his rival to be cast into the den, when a substitute, in the person of Mr. Crockett, the Lion Tamer, fortunately appears. His offer to sacrifice himself for "Rung Jung's" benefit being accepted, he opens a door at the top of the cage, and pops into a good-sized den, containing three lions and a lioness.

The moment he was in the den, I could see the tempers of the animals. There was the old black-maned African lion, the tamest of the lot, and the best performer too. Next, a lion nearly his size, an easy-going beast of the same species. Thirdly, an Asiatic lion, the fool of the party, not over-good-tempered, who does not half relish being tamed. Lastly, the lioness, a regular savage vixen, who retired with open jaws and snarling lips into a corner, and swore and spit at the Lion Tamer whenever she had a chance. With a small hand-whip, the master makes his beasts (even the lioness) perform sundry tricks, which must have cost him much time and patience to teach, and, I should imagine, have placed him often in great danger; for

woe be to him if the lions should agree to get up a family quarrel, and make a party against him. I saw him put his head and face into the lion's gaping mouth, which nearly concealed it in its enormous abyss: a feat which must require great confidence, not only in the temper of the lion operated on, but in the other animals also, for the attention of the master is for a moment withdrawn from them. Altogether, Mr. Crockett achieved a great triumph over his three lions and his lioness; his feats are gone through without unnecessary parade and show, and he has taught us what kindness and firmness will do with these magnificent, but at times dangerous animals.*

A few days after my visit as above described, a sad accident happened with these very lions, and in this very theatre.

In the grey of the morning of January 14th, an unfortunate stable-helper, ordinarily known by the name of "Jarvey," went through a wicket-gate into the theatre to perform his duties of raking the sawdust of the arena of the theatre. A few minutes after he had been in the theatre, a man in the stable close by heard a terrible cry, and heard some one exclaim that "a lion had got Jarvey." He wisely sent off for Mr. Crockett at once. On his arrival in a few minutes Crockett seized a two-pronged fork, and went into the theatre, through the wicket-gate, and there he saw that his lions were not in their cage, but loose. Two lions were on

* I am sorry to say that since this was penned poor Crockett has died. I know not the cause of his death, except that it was in no way connected with his lions; nor do I know what has become of his valuable collection of trained lions.

the stage free as the day, and playing with the garlands left by an actress; the big lioness was up in the Queen's box, with her paws on the front of the box, gazing out as proudly as possible, and near the stable-door, and about six feet from the gates, lay the man "Jarvey," the lion sitting over him, as a dog sits over a bone.

Seeing this, Mr. Crockett advanced boldly up to this murderous lion, and struck him a tremendous blow over the head near the nose, at the same time rating him most severely. The lion sneaked off at once: he then boldly rushed after the lioness and the other lion, threatening them with his pitchfork, and abusing them most vehemently. The brutes knowing their master and fearing him, at once sneaked back to their cage, and jumping in, lay down looking at Crockett as though they knew they had done wrong. Crockett shut the door fast and returned to the assistance of poor "Jarvey." In spite of all that the best medical attendance and care could do the poor man died soon afterwards. The lions' fearful attack had been too much for him.

The reader might like to know how the lions got out of their cage. Crockett at the inquest stated that he was quite certain that he had locked the cage-door quite securely the previous night—that one of the panels which inclosed the iron cage had somehow got loose, and hung loose in front of the cage; one or more of the lions had then probably put out his paw and seized a bit of cloth lying on the top of a cage close by, in which a sick lion was confined; and in pulling it through the bars of the door with their talons so as to get it into their cage, they must have broken the door down altogether by pulling it inwards.

The door had been fastened with two shot bolts and two spring bolts, but a large portion of the side of the cage was torn in, and the piece of cloth was found *in* the cage. The lions, he thought, had wrenched the door by pulling it inwards, and had made their escape when it was opened.

Upon hearing of the above accident, I immediately went down to the scene of the catastrophe, and by the kindness of Mr. Miskin, of York Road, Lambeth, the surgeon who gave evidence at the inquest, I was enabled personally to make the *post mortem* examination of the man who was killed, and with him to record the notes which appeared in the papers.

It will probably interest the reader, to read some remarks on the nature of the wounds, and on the probable way, judging from these wounds, in which the lion seized the man. The first thing observable on the body were a number of wounds (no less than twenty-seven in number) about the *left* side of the neck, whereas there were eight only on the *right* side. These wounds were peculiar in shape, tapering towards the two ends, and broad in the middle, indicating that they had been produced by a tearing, but yet cutting instrument. They were cat-scratches, in fact, only highly magnified. One of the claws had penetrated the ear, and had nearly torn it from the skull. The direction of these scratches was downwards and backwards, indicating that the animal had seized hold of his victim from behind, and pulled him down. I account for there being so many more wounds on the left than on the right side by assuming that the lion (as is its habit) cuffed him first on the right side and caught and held him on the left, just as we

see a kitten playing with a ball of worsted. It is also probable that the lion bit his victim at least once in the neck, for a portion of one of the vertebræ of the neck was found slightly chipped, as if by the tip of the beast's tooth, causing mischief to the actual spinal cord within the bone.

Besides these wounds on the neck, several cuts of an extensive kind were discovered on the head among the hair; these also resembled magnified scratches more than clean-cut wounds, or teeth-marks. These wounds were indicative of more serious damage to the structure of the brain below, and accordingly we found much blood effused on the surface of the brain—the result of a blow, that blow being the “pat” of the lion's paw.

Now “pat” indicates rather a delicate strike than a sledge-hammer knock; but be it remembered that the three most powerful things in the animal kingdom are said to be—firstly, the stroke of a whale's tail; secondly, the kick of a giraffe; and thirdly, the “pat” of a lion's paw. As the fore-arm of the lion which died at the Zoological Gardens was more than one foot in circumference, conceive the striking power inclosed within this space, and that, too, worked by the largely-developed muscles about the shoulder.

A pat with this formidable weapon is positively a fearful blow; the Nasmyth's steam-hammer, working with elegant ease, will strike a blow which the spectator would hardly expect without seeing its effects. The lion's paw is the Nasmyth's hammer in nature: woe to the human frame submitted to its force. It is therefore pretty apparent that if we look for the *most positive* cause of death in this man's case (for really there were

many causes present on the body), we may fairly say that it was the blow of the paw that stunned and killed him on the spot, the lion first having seized him by the neck, as above described.

All this corresponds with the evidence given: the subdued exclamation of "Oh, oh!" was heard, so mournfully yet truthfully telling of his hopeless and hapless state. Again, we could not help remarking the absence of all other sound either of moan or struggle: and this showed the rapid succession, if not simultaneousness, of the man's exclamation, the blow of the lion's paw, and death itself.

After having struck the man down, the beast must have attempted to pick him up to carry him, for the thigh was covered with wounds (as though it had received a charge of small bullets). These were probably caused by the teeth of the animal, who, finding that he could not obtain a firm hold near the knee, had fastened his teeth into the groin from the inside; the deep wounds—one above the os pubis, the other below—indicate this. As remarked by Mr. Miskin, the wounds in all places were much more serious than at first sight they appeared to be, the parts being much bruised.*

It is well known that the cat tribe are most difficult to tame, in the ordinary acceptation of the word; they may become docile, but they can never be entirely depended upon. The dominion which a man has over a lion is moral, not physical; the moment the lion

* There is, I believe, no record existing where the effects produced upon the human frame by the attack of a lion have been carefully recorded by members of the medical profession. I avoid medical technicalities as much as possible. I therefore venture to give them as above.

finds this out he will take advantage of it. The lions well knew that Mr. Crockett, "the lion-tamer," was their master—they obey and respect him; and it was most worthy of note how rapidly he drove these animals from the theatre back again into their cage after their midnight wanderings in the boxes and stalls, showing what command he had obtained over them. The unfortunate man who was killed probably ran from the lions; if he had stood still, and boldly faced them, he would have had a better chance for his life.

LIONS AT THE ZOOLOGICAL GARDENS.

IT is strange how that, amidst the high state of civilization to which *we*, the present inhabitants of the earth, flatter ourselves we have attained, there still lurks here and there relics of the customs of the ancient men, the first pioneers of civilization. One of the most marked customs of our rude, warlike, but yet highly respected forefathers, was the choosing of emblems, whereby not only individuals (witness the helmets and banners of the Knights Templars), but even whole nations, might be distinguished and characterised one from the other. Thus, even in sacred as well as profane times, we find that animals have been chosen as fit tokens and signs to be emblazoned on the standards of the armies when they went forth to war. Thus, when the Tribes of Israel were first separately designated, the Lion was chosen as the standard of Judah.*

* We read, Numbers x. 14 :—"In the first place went the standard of the camp of the children of Judah, according to their armies." The other standards of the various tribes, as represented by animals, were Issachar by "a strong Ass, couching between two burthens;" Dan by "a Serpent," Naphtali by "a Hind," Benjamin by "a Wolf."

We have but to look around us even at the present time to find the same idea still prevalent. The Russian double-headed eagle extends its power over vast tracts of the old world continent; the Austrian eagle has frequent times and often met face to face in deadly combat with the Gallic cock; the eagle of the warlike Romans spread its conquering wings over the downcast walls of the sacred city; but what animal out of the whole creation has England, the favoured country to which we belong, chosen as its representative? Need I mention that the king of beasts, the lord of the forest—the LION—stands forth in all his natural beauty and graceful magnificence as the type of the Englishman and the English nation?

We have heard of late much of the lion's habits when at home, and travellers do not give him so good a character for courage or for such noble attributes as he is supposed to possess. No man, however, is a hero in his nightcap; and it is not altogether fair to tell stories out of school.

Anyhow, I would venture to observe that, whatever the Lion may be said in books to want in daring and bravery, he evidently possesses some great and formidable qualities; for were it not so, how is it that travellers are always in such a desperate hurry to get out of his way, and keep such a respectful distance from his majesty's person when he is offended? Then, again, what in nature can be grander than the voice of this "Desert King?" How do hearts, both of man and beast quail, when, camped in the solitude of the wilderness, far, far away from human aid, the terrific roar of the lion falls upon their affrighted ears amidst the howling of the

wind, the crash of the storm, and the peals of heaven's artillery! The Lion is awake, he is hungry; we know not how near he is; we know not who is to be his victim!

Such a scene as this has been admirably realized by my friend, T. C. Carpendale, Esq.,* in the drawing I present to my reader. (See Frontispiece, Vol. II.)

The sun is just sinking down at the edge of the wilderness, and a long dark stormy night is at hand; the clouds are rolling up heavy and dark from the horizon. The elands and the antelopes are on the distant plain cropping their evening meal in peace, and lo, from behind the rocks stalks forth a huge dark cat-like figure; silently and lightly as a shadow he moves his giant and ponderous frame—his foot-fall is unheard even by his victims proverbially swift of ear.

At his side are the jackalls; the one gazing eagerly at the beasts which he is well aware his friend the lion will soon lay bleeding at his feet; the other thin and famishing, is cracking up a bone long since dried up by the heat of the sun. They will both soon have ample; only wait awhile, till their master has slain his victim.

The sun disappears—then the Lion's thunder-roar peals along the plain—night comes on.

“Darkness He makes the earth to shroud,
While forest beasts securely stray,
The lions roar their wants aloud,
To Providence who sends them prey.”

Who, may I ask, can listen to the chanting of the

* Mr. Carpendale, a native of Tiverton, Devonshire, has lately returned from America, where he has made a great reputation for his drawings of lions and life-like sketches of horses.

104th Psalm—that grandest of grand poems on nature's works and power—in Westminster Abbey or St. Paul's Cathedral, without feeling a thrill run through him when the deep bass notes of the organ and the swell of human voices proclaim that

“ THE LIONS, ROARING AFTER THEIR PREY, DO SEEK THEIR MEAT
FROM GOD ! ”

Who, again, can doubt the beauty of the many passages in Holy Writ where this noble beast is mentioned ; or who can gaze upon the sculptures of nations long passed away, without feeling that the Lion is indeed a noble beast ? next to man himself, perhaps, the most glorious specimen of the handiwork of the Creator.

Shall not *we*, therefore, feel proud that the lion is by all and everybody considered as equivalent to the Englishman and the English nation ? The Lion has gigantic strength, individually and collectively—so has the Englishman. The Lion is playful and kind in disposition when properly and respectfully treated—so is the Englishman. The Lion loves fair play ; he gives notice of his displeasure with a word, and follows it by a blow—so does the Englishman.

The Lion has a good appetite, and his principal and best-loved food is beef. Who can say that the Englishman does not resemble him in this point ?

Let us, therefore, for once go and see the Lions at dinner at the Zoological Gardens,* even though they are prisoners, poor beasts.*

* I hear there is just a possibility of a large space being enclosed at the gardens, with strong iron palisading, so as to form one gigantic cage, in which rocks, &c., will be placed ; forming, in fact, a gigantic

But we must first go into the kitchen to see the dinner prepared for the Lions. Our old and civil friend William Cocksedge—who has had over thirty years' long and faithful service with the lions, and who really loves his beasts; and, if action mean anything, is beloved by his beasts in turn—shows us the good things he has provided for his pets. The daily rations of the lions are alternately beef and horse; and each beast is allowed about from eight to twelve pounds of meat, weighed with the bone.* The lordly dish in which the dinner is served is a wheelbarrow kept sweet and clean; the knives and forks are provided by the lions themselves in the shape of sharp teeth and claws; and the dinner is “served” on an instrument well suited to the purpose. Cocksedge also, from time to time, provides condiments with the meat; for upon it he occasionally sprinkles a proper allowance of common flower of brimstone, or sulphur, as this keeps the animals in good health and condition, upon the principle of occasionally giving our own youngsters a treat of brimstone-and-treacle by way of a change.†

It has been aptly remarked that the nearest way to

“den ” for the lions. What a treat it will be to see the noble creatures in comparative freedom, and bounding about with the graceful movements peculiar to the cat tribe!

* A lion costs, Mr. Bartlett informs me, about 3s. per diem for his food. Rather expensive pets, are lions, when there are many of them.

† Some few years since, the lions and other carnivora at the Zoological Gardens were seized with an epidemic, which threatened to destroy them all. This terrible calamity was, however, averted by Mr. Bartlett's giving them chlorate of potass, a medicine both he and I recommended for the Rhinderpest, or cattle disease. See my letter in “The Times,” Oct. 19, 1865.

the heart is down the mouth, and this maxim holds good as well with beast as with man ; ' besides this, it is wonderful how the human and the brute memory, though oblivious of other matters, *never* forgets the dinner hour. There is a story of a cavalry Officer, who, when examined by the commanding officer as to the meaning of the various trumpet calls, confessed, after many bad shots as to their signification, that he really only knew but two, and they were—"dismiss" and "dinner." So, too, the lions know well their dinner call, which is simply the rumbling of the wheelbarrow over the stone pavement in front of their dens. It is most curious to witness how well the poor brutes know this welcome sound. The big leopard sits up on his haunches, and makes a sort of half yawn, half laugh, showing his pink lips, his rough tongue, and his ivory teeth, as much as to say, "Well, *I* am ready at all events."

The tigers, Bill and Bess, jump one over the other at a game of leap-frog, as though they were perfectly indifferent as to what was going on. Like we ourselves, when waiting for dinner, have but one thought (and that is, "How soon will dinner be ready?" but do not care to show that this thought is uppermost in our minds), so do the hungry carnivora attempt to while away their time in feline conversations about the weather, and looking over sawdust albums.

Then, again, look at the old Lion—a hearty old fellow, strong, powerful, in good health ; his noble eye gleaming with pleasure ; his mane—long, glossy, thick—is all bristled up ; his tail lashes quickly and eagerly from side to side. Of course he is not hungry ; oh dear, no ! but yet why does he pace up and down in front of the

bars of his cage like a sentry on a cold frosty night? And why does he perpetually sweep his magnificent mane against the bars, reminding us of the marble lion in the statue of Andromeda and the lion? And why does he attempt impossibilities, by doing his best to peer round the corner to look for his dear friends Cocksedge and the wheelbarrow? They at last appear in company, and then look at the games all the hungry creatures begin. The lions Jane and Jack dance the sailor's hornpipe, accompanying themselves with their own elegant music. The jaguar skuttles round and round his den, and the hyæna plays the bagpipe for the lot. Then comes Cocksedge; he gives a bit of meat to the jaguar.

"Here you are, you saucy old hussy; give us your pat for it; well, you want a bigger bit, do you?" Pussy purrs assent. "Here's a good pennyworth; then you can eat the rest by-and-by for your supper. Don't be greedy now, my pet."

What a treat it is to see how these wondrous carnivora clutch their meat through the lower bar of the den! How proudly they retire with it to the rear of the den, and how some of them seem really to enjoy it! Let us wish them *bon appetit*.

Alas! alas! but a short time after I saw the old lion so thoroughly enjoying his dinner, Mr. Bartlett kindly sent me word that the old patriarch had died very suddenly, and at the same time he invited me to be present at the dissection.

It appeared that the lion was quite well on Saturday night, and ate his food heartily as usual; but when the



THE MONARCH LYING IN STATE.

keeper came on Sunday morning, behold, the poor beast was extended full length, dead and stiff upon the straw of his bed, having apparently died without a struggle. Alas! poor Lion!

The able pencil of Mr. T. C. Carpendale enables me to give some idea of the grand and really magnificent appearance of THE MONARCH OF THE DESERT LYING IN STATE. The artist has endeavoured to give the idea of a very old lion, who has lived his full term of years free and unmolested in his native desert. But the "grey hair came upon him;" his teeth and his claws became unequal to their work, and he could no longer provide himself with food. He wanders along the sandy wilderness, till, faint and exhausted, his strength will carry him no further. He stumbles against a rock, and falls to rise no more. (See Plate.)

But Mr. Carpendale shall describe his drawing in his own words:—

THE LION'S TOMB.

"Pale twilight, deep'ning, sheds a sober gloom,
And dimly lights the lion's lonely tomb!
Th' awakened plunderers of earth and air
Around the dying chieftain's couch repair;
While, high in air, with dark and shadowy wing,
Behold th' expectant vulture hovering!
Mark how she lingers in the starry sky,
And tunes her plaintive, funeral song on high!
Near, and more near, athwart the fading light,
She screams terrific to the peaceful night,
Chanting her farewell sonnet to the sun—
Sad emblem that his mighty race is run."

In admiring the marvellous beauty of the Lion, whether we regard him under his royal title as "King of the Beasts," or whether as a dead animal before us for anatomical examination, we cannot but be struck with many parts of his bodily economy which the occasion of his death enables us to inspect without personal danger. I will therefore, with the reader's permission, give some details of the wondrous anatomy of the Lion, as it is not often that the opportunity offers of examining such a fine specimen as that which died in the Gardens, in December, 1860.

Having hauled, with difficulty, the huge carcase of our Lion upon a table in the Society's dissecting-room, in company with a few medical friends at the Gardens, we carefully searched for the cause of his death, and the verdict was, "Died from congestion of the lungs, caused probably by the excessive cold."

Our defunct friend had been in the Gardens about twelve years, and when he arrived was a cub so small as to be easily lifted by a man into his den. He was a famous roarer, and those who lived near the Gardens must frequently have heard his thunder-like voice at sunrise and sundown. His height at the shoulder was about 4 feet; length of the body, 5 feet 8 inches; of the tail, 3 feet 5 inches; altogether a very large and powerful animal.

There is very much to be admired in this gigantic representative of the cat tribe; in it we find monstrous strength combined with great activity and elegance of form, amounting to positive beauty. Again, we see how admirably each organ is suited to co-operate with its neighbour; how the padded feet correspond with

the nocturnal eye, how the scissor-like teeth are adapted to work with the pointed claws, and how the whole muscular system, closely locked and knitted to the bones, wields with ease the formidable destructive weapons with which it has been endowed.

The first thing that struck me, on looking at the dead animal, was the massive and herculean fore-arm — a compound of the hardest muscles and wire-like tendons : a measure told us that the circumference of this powerful limb was no less than 1 foot 7 inches, or nearly the size of an ordinary hat. Then the gigantic foot arrested the attention, for it measured, at the lower surface, $6\frac{1}{2}$ inches, and when outspread, 8 inches.

A delicate, soft, harmless-looking foot is this, with a beautiful fringe of fur round the edge ; but what do we see under this fur ? Snugly concealed, like riflemen in ambush, are those dread claws, which, when extended, and intent on blood, will tear furrows an inch or more deep in the thick skin of a buffalo or giraffe, or hold the powerful eland with a vice-like and deadly grasp. Then, again, remark the soft, velvet-like pads which fill up the hollow of the foot (the largest pad being 4 inches broad). Has human ingenuity ever contrived, or ever will it contrive, any such elastic, firm, yet noiseless material, which shall enable the wearer to steal up with a ghost-like motion upon the unsuspecting prey, be he ever so wide awake ? We strip the skin from the foot, exposing the tendons (or leaders), which, though beautifully white and rounded, possess the strength of the twisted iron-wire rigging of a ship, and work with the ease of a greased rope in a well-worn pulley. We admire their excessive complexity, yet their admirable arrange-

ment; and tracing them up to the actual claws, or talons, perceive how marvellous, yet simple, is the arrangement by which these formidable and lethal weapons are, without effort on the owner's part, made to retract into a secure place of protection, and their sharp points to be sheathed like a dagger in its scabbard. Doubtless the inventor of the india-rubber spring, which spontaneously closes the door of our dwelling-room, thought he had made a great discovery; but he is probably not aware that in the lion's foot he may find the pattern of his invention registered by Nature herself.

Protruding from the lion's lip, on either side, we observe a formidable display of whiskers, which in our own species are generally more for ornament than for use (except as Lady-catchers). In our friend the lion, on the contrary, we find that nature makes them serve a beneficial purpose, for they act as feelers, and those, too, endowed with great sensibility. When it is too dark to see, the lion feels his way through the under-wood by means of his whiskers, and pounces upon his prey. How is this done? We trace one of the whiskers to its root, and find that it terminates in a mass of highly-sensitive nervous substance, which forms an oblong bulb, as large as an apple pip; each hair has its own bulb, and these whiskers are therefore so many watchful sentries which take their posts on dark stormy nights, when the regular duty-men (the eyes) are unable to keep watch and guard. The same arrangement holds in our domestic puss. Should you doubt this, pull puss's whiskers sharply and mark the result.

The Lion is gradually crawling up to seize his un-

suspecting prey, and his eyes are fully occupied in watching their movements. He has, therefore, not much attention to spare for other things. He is, however, enabled to glide through the underwood and among the rocks by means of his outspread whiskers, which, just touching the obstructions, telegraph silently to his brain, "keep to the right, keep to the left, ground free," &c.

The seal too has these whiskers with their sensitive nervous bulbs. In this case the idea is the same, viz., to enable the seal to give his whole attention to the fish he is pursuing, while the whiskers prevent him from running foul of the rocks among which the hunt is going on. I hope in my new paper, "The Land and Water," to write an article on these sensitive whiskers as developed in nocturnal and diurnal animals. The subject is full of interest, and has never yet been thoroughly investigated.

The ox and the giraffe have long flexible *prehensile* tongues, by means of which the animal is enabled either to cut the short grass of the field, or pull off the leaves from the lofty palm-trees. Not so the lion—the dread slayer of the herbivorous races—his tongue is by no means smooth or prehensile, but, on the contrary, broad, thick, and rasping. The papillæ, or elevated spots, which in most animals are soft and velvet-like, in the lion are converted into prominent and sharp horny excrescences. In the fresh state the tongue feels rough to the hand, but as it is dried the roughness becomes more perceptible, till at last we have a surface more like that of a farrier's new file than of a tongue. In the dry tongue of the lion now before me, the horny spines at the top of

the tongue are no less than one-sixteenth of an inch in length ; they gradually get smaller towards the root of the tongue, where they are set in oblique rows like the teeth on a file. Now this rough tongue is of great use to the beast, for having struck down his prey with his sledge-hammer claws, and gnawed by mouthfuls the flesh from the bones, he finishes his dinner by scraping at the bone with his tongue, and literally rasping every remaining portion of meat from off it in a more perfect way than does even the butcher from the marrow-bones he sends out to his customers. Domestic puss has this rough tongue as well as the lion. It may be well seen when she is lapping her matutinal milk, or picking at the rejected chicken-bone. Young observers should get a cat's tongue, cut off all the meat with a pair of scissors, and dry the rough skin ; the spines will be then well seen.

I must not forget, talking of horny spines, to mention the much-disputed story of the "claw at the tip of the Lion's tail." The first thing I did was, of course, when at the lion's post mortem, to examine if any such claw, or anything approaching to a claw, existed concealed on the tail of our specimen ; but my search, as I expected, was not successful. This story of the claw on the tip of the lion's tail has by many been thought to be an untruth and a myth ; but there is foundation for the fact. It was observed by the ancients, for the lions represented on the Assyrian marbles have claws at the end of their tails. Pliny describes the lion as "lashing himself into a rage by means of his own spur." Homer also mentions it. (See Appendix.) It remained therefore a sort of open question till the time of Blumenbach, who described the prickles as "small and dark-

coloured, hard as horn, and placed in the very tip of the lion's tail, surrounded at its base by an annular fold of the skin."

The subject was in our own day taken up again by Mr. Woods; for in the "Proceedings of the Zoological Society," September 11th, 1832, we find it recorded that a specimen *was exhibited* of a claw obtained from the tip of the tail of a young lion from Barbary; it was first seen on the living animal by Mr. G. Bennett, who pointed it out to the keeper; they secured the beast, and while handling the claw it came right off, and was brought under the notice of the Society. "It was formed of corneous matter, like an ordinary nail, being solid throughout the greater part of its length; towards the apex it is sharp; at the other extremity it is hollow, and a little expanded; it is flattened throughout its entire length, which does not amount to quite three-eighths of an inch. Its colour is that of horn, but becomes darker, nearly to blackness, at the tip. Its presence or absence does not depend upon size, as the lions in Paris on which it was found were of considerable size, while that belonging to the Society, from which the present specimen was taken, is small and young; nor upon sex, for although it is wanting in the female in London, it existed in the lioness at Paris."

Mr. Woods had previously examined the tails of all the stuffed skins he had access to, and found it only in an adult Asiatic leopard. He remarks, "that it is difficult to conjecture for what purpose these minute claws are developed in so strange a situation, that of stimulating the animals to anger being out of the question. It is at least evident from their smallness, their variable

form, and their complete envelopment in the fur, and especially from the readiness with which they are detached, that they can fill no very important design." My own opinion is that this claw is no more than a bit of the ordinary scarf skin of the tail, which, being confined to its place by the dense hairs which form the tuft at the end of the tail, is prevented from falling out of its place, and in time it becomes hard and horn-like. Any information on this subject I shall thankfully receive.

I have more to say of the anatomy of the Lion, but would rather turn attention to lions of another kind. Englishmen have for ages past, even before the days of the lions at the Tower of London,* been fond of the beast they have chosen as their emblem. They are, moreover, plentiful enough—if not alive, yet in pictorial representations, all over England; for there is hardly an *English town or village that has not a lion—black, white, red, or blue (any colour, of course, but the right—tawny)—hotel or public-house in it.* In fact there is a story told of a lawyer who told his clerk to take an unwelcome visitor out round the town to see the lions; and after their journey they both returned in a state of intoxication, the clerk having taken the visitor literally to see "the Lions," and, of course, when they arrived there, they were obliged to try the tap under their jurisdiction. There were so many lions to be visited that the interviews they had had with them had disturbed their equanimity.

* I cannot help thinking that the expression we so commonly use now, "Going to see the lions," began when people used to visit these animals at the Tower.

There is a famous Lion on the top of Northumberland House at Charing Cross—the same beast that wags his tail across the full moon on the first day of April in each year—and I understand that large sums of money have been lost and won on the wager as to which way this Lion's head was turned; *i.e.*, whether the Lion looked towards the City or the West End. A party of Officers were assembled in a regimental mess-room in Dublin, when the subject was started, and many bets were made both ways as to the position of the lion. A certain Officer had betted heavily that he looked towards the City, and when he went to bed he sent for his black valet. "Which way," said he, "does the Lion on Northumberland House look?"

The nigger scratched his head. "Ah! massa," said he, "he look straight, direct towards the Bank of England; 'cos why, his money all there. When I was wid you at the Morley's Hotel, de first ting I see in de morning was de great big Lion; he stare right into my face."

"Enough!" thought the gentleman. He immediately went down stairs again, and doubled his bets that the Lion looked towards the City.

The next morning, when Sambo came in with the hot water, he said, "Gorra, massa, me tink me made mistake last night; me tink de Lion have turned himself and look de other way."

"You scoundrel!" said the master; "be off to London instantly by the express, and telegraph to me the moment you arrive which way the Lion really does look."

Report tells us that no telegraph message ever

arrived, and that the nigger has never been heard of since.

Which way then is this Northumberland House Lion placed—does he look t^owards the City or towards the West End? Reader, solve the question for yourself, recollecting always that there is an excellent reason for his position, for no British Lion—be he biped or quadruped—ever turns his back on her Most Gracious Majesty the Queen.

TIGERS.

THOUGH I have not had much to do with live Lions, yet one day we had great fun with a young tiger. My friend Mr. Bartlett kindly sent over to the Regent's Park Barracks, to report that they were all ready to "pack up a tiger," and would I come over? Of course, I was soon at the Gardens, and a curious scene took place.

The tiger to be "packed up" was about the size of a good big sheep-dog (only, of course, longer in the body). She had been captured as a cub, and brought over from India on board ship, where she had been made a great pet of by the sailors, and was in consequence pretty tame. "Puss" (for that was her name) was in one of the big dens next the large lions, having for her playmate a young leopard.

The box in which she was to be placed was wheeled up in front of the den, and placed on its side; it was simply a large box with strong broad wooden bars on one side (the two centre ones taken out), and two strong bits of wood so arranged as to be screwed down in

front of *all* the bars when the beast was safe inside. I write *when*, because it proved no easy task to get her into this box. All preliminaries being arranged, Cocksedge, the keeper, who knows no fear with his beasts, went into the den with the tiger, and called "Puss, puss, puss," in an amiable manner. The tiger came bounding up in a kitten-like fashion; she carried her tail erect over her back, and then raising her fur, began to purr and rub herself against his legs. Cocksedge then took a bit of rope out of one of his capacious pockets, and proceeded to pass the end of it under Puss's collar. Puss in the mean time began to play with the slack of the rope, as though it was great fun. Cocksedge, having fixed the rope, began to draw Puss gently towards the door. She did not seem to care about this very much, but still thinking that "a romp" was meant, patted the rope with her paws. Cocksedge, however, got outside the door of the cage, and pulled somewhat harder. Puss began to think that something more than a game of play was meant, so she extended her feet, and pulled well backwards, and her expression seemed to say, "two can play at that game, my friend."

Another keeper then got into the den, and giving her a gentle lift up behind, out she went of the open door on to the stone space which is railed off to keep visitors from the bars of the dens. The moment Puss felt she was out of the cage, down she crouched, lashing her tail, as though determined not to move an inch. The box was brought nearer, and the rope passed in round one of the bars, and then outside again. The keepers began to pull gently and slowly upon it, the

only result being to bring the "mountain to Mahomet"—i. e., the box to the Puss, not the Puss to the box.

When the box was close to her head, they gave a sudden pull on the rope, and at the same time advanced the box quite close to her. The result was most laughable. Has the reader ever witnessed the execution of "Punch," by hanging, in that most popular of street performances? "Punch," it may be recollected, cannot be made to understand where he is to place his head. In like manner, Puss could not understand what benefits could be derived from placing her head into the opening of the box before her; so the result of the pull on the rope, and the advancing of the box, and the lifting of her hind-quarters, was simply to bring her head well on to the *top* of the box, several inches above the lid, her sprawling arms and legs being extended, spread-eagle fashion, in front of it. "Try again," therefore, was the word. "Look out," said I to Cocksedge, "the strap round Puss's neck is only leather, and is very likely to give way." Accordingly, on the next trial, smack it went, and Puss, feeling herself loose and free, instantly made a bolt for it. Cocksedge, with his usual coolness and courage, snatched at her as she was slouching quickly away, and got hold of her tail.

Like the cats used in that refined, but barbarous punishment of the poor niggers, where a common house-cat is placed on the poor black man's back, and her tail smartly pulled, so did "our Puss" instantly extend all her sharp talons, and hold on, as well as she could, to the stones, thus giving time and opportunity for the rope (without the strap) again to be placed round her neck. A trial was again made to get her into the box :

but Puss, having by this time found out that Cocksedge was in earnest, showed fight in the most wonderful manner. She put back her ears, showed her young, yet terrible fangs, and struck at any intruding human limb with her broad, talon-armed paws; she had quite lost her temper, and was a true embodiment of the phrase the nurse sometimes applies to a naughty child—"She fought like a young tiger." At last, feeling somewhat exhausted, she sat down on her haunches, lashing her tail from side to side with real anger.

The rope plan was therefore given up, and the director of the proceedings, Mr. Bartlett, ordered the keeper to "fetch the bag." He shortly reappeared with a common sack, the open end of which was mounted on to a strong pole (like an ordinary landing-net for fishing), the shut end of the bag being laced up, after the fashion of a Balmoral boot, only that the lace-holes were much further apart. Watching his opportunity, one of the keepers slipped the bag over her head (like a lady catches a butterfly on a hedge), and Puss was fairly in the bag; he then lifted it up, thinking Puss would stay quietly there. Puss thought otherwise, for the moment the bag was off the ground she twisted herself right round, her head appeared at the mouth of the bag, and out she hopped like a "Jack-in-a-box;" her wrath in the mean time grew fiercer and fiercer, and she challenged all comers to deadly combat. Stealing up this time behind her, while Mr. Bartlett kept her attention engaged in front (the "Puss, puss, puss" days were over long ago), the keeper put the bag once more over her head, and lifting it up a little from the ground, a rope was tied round it, the bag was then

lifted up by means of the pole, and a pretty turmoil took place inside it. Puss scratched, and yelled, and jumped about so, that one would have thought that the keeper had caught a real live demon, but this did not last very long; the closed end of the sack was placed over the opening in the box, and the lacings carefully undone, and Puss fell into the box by her own weight.

It made me laugh to look at her face when she was a prisoner. She peered out of the wrong side of the bars with her bright but glaring eyes, which seemed to say, "Well, you have done me now. If I had known what the lot of you were about with your 'Puss, puss, puss,' and your fawning civilities a quarter-of-an-hour ago, nothing would have induced me to come out of my cage so readily. Confound that sack, that's hardly fair." When the conquered Puss was safe in the box, the victorious Cocksedge rubbed his hands and set to work vigorously to screw down the bars which were to keep her in. "You're all right now, you tiresome young hussy," said he, "and off you'll go by to-night's train to Mr. Edmonds's menagerie, at Manchester; and I only hope they will use you as well there as I have used you here."

JAMRACH AND THE RUNAWAY TIGER.

IN Mr. Edmonds's menagerie I saw the tiger that escaped from his cage in Mr. Jamrach's (the animal dealer) yard, and seized a boy in the street in Ratcliff Highway. An authentic account of this tiger adventure in the streets of London has not to my knowledge ever

been published. I make it my rule to get my information on such matters, if possible, first hand. I therefore give the story as Mr. Jamrach told it me himself, and not in the form of a clipping from a newspaper.

It appears that in October, 1857, Mr. Jamrach purchased a lot of animals from a ship arriving from abroad, and among them a large tiger in a den. During the voyage the weather had been very stormy, and the sea had frequently washed over the decks, the tiger's den partaking in the general wetting.

When the ship arrived at the London Docks, the den was put in a van and placed in Mr. Jamrach's yard, with the bars towards the wall. The den having been thus placed, Mr. Jamrach walked away, when on turning round a few minutes afterwards, he saw that the tiger had reared herself up on her hind-legs, and a board giving way to her pressure, he perceived with horror that she was coming loose out of the den.

In a few moments the board, which was quite rotten, "let go," and out walked the tiger through the yard gate into the street. A little boy, about nine years old, happened to be playing in the street. This little boy, thinking that the tiger was a big dog, walked up to her, and began patting her; the tiger then turned her head and seized the boy by the shoulder with her tremendous fangs. Jamrach immediately running up grasped the tiger by the loose skin of her neck, but, although a very strong and powerfully-built man, he could not hold the beast, who immediately started off down the street at a gallop, carrying the boy in her mouth as a cat would a mouse, Jamrach holding on tight all the time to the tiger's neck, and keeping up with

long strides by her side, like a groom by the side of a runaway horse.

Finding that his hold was giving way, he managed to slip the tiger's hind-leg from under her, and she fell to the ground. Jamrach instantly threw his whole weight down on her, and letting go the skin of her neck, fastened his two thumbs behind her ears with a firm grip. There tiger, man, and boy lay many minutes altogether in a heap, the man gripping the tiger, the tiger (still holding the boy in his fangs) all the while suffering great pain from the pressure of Jamrach's hands, and from impeded respiration. After a time one of Jamrach's men was actually bold enough to put his head round the corner to see if he could render his master assistance. Jamrach cried out, "Bring me a crow-bar!"

The man got a crow-bar, and struck the tiger three severe blows on the nose with it, which made her drop the child from her mouth. Jamrach then sent him for some ropes; these ropes, of course, in the confusion became entangled, and the tiger, watching her opportunity, sprang up, and getting loose, ran back again up the street, Jamrach after her, crow-bar in hand: she bolted immediately round the corner, through the yard gate, and leaped into her den, from which she had escaped. Once inside, she cowered down and lay as quiet as possible.

The child was, strange to say, not much hurt. He had only a bite on the shoulder, which got well in eight days. The poor little fellow, however, was so terribly frightened that he never spoke for four hours.

Mr. Jamrach got the worst of this affair; for having

had to fight the tiger, he then had to fight the lawyers, and the whole business cost him, in damages and law expenses, over 300*l*. He had caught, in fact, a Tartar ; for, said he, "There was a lawyer as well as a tiger inside the tiger's skin ;" and he had first to tackle the tiger, and then lawyer afterwards—too much for any man's nerves.

This story of the child and tiger got into all the newspapers, and Mr. Edmonds, seeing the account, came up from Birmingham (where his menagerie then was being exhibited) and bought the tiger for 200*l*. He put it in his collection, and advertised it as, "The tiger that swallowed the child in Ratcliff Highway." Everybody went to see it, of course, and his purchase turned out a good speculation for *about four days*, but no longer ; for this very tiger, when the men were gone to dinner, put her claw into the partition of her den, pushed out the partition, and walked into the neighbouring den, in which dwelt a Lion worth a large sum of money. The tiger immediately attacked the Lion, catching him by the throat, and in a few minutes killed him. This same tiger is, I believe, still being exhibited in Edmonds's menagerie.

I really think, and doubtless my readers will agree with me, that Mr. Jamrach deserves very great credit for attacking his fierce and runaway tiger single-handed, and rescuing the poor little boy. I record the story as a testimony to his courage and pluck.

COLONEL RAMSAY'S TIGER.

IN December, 1863, Mr. Ward, taxidermist, of Vere Street, Oxford Street, invited me to examine a magnificent specimen of a tiger, which he had just stuffed for Lieut.-Colonel R. A. Ramsay, late Commandant 3rd Ghoorka Regiment. The gallant Colonel had shot the noble beast when hunting at Huldwane Kumaon Terai, North West India, and wisely determined to have him preserved, that his friends in England might see what a monstrous brute a full-grown tiger really is. Having seen this tiger in Mr. Ward's shop, I called upon the Colonel, and requested him to be good enough to allow his tiger to be placed in "The Field" window, in the Strand, that the public might have an opportunity of seeing and admiring him. The Colonel most kindly consented to this, and, for a considerable time, there was always an admiring crowd round "The Field" window. The following is the account the Colonel gave me of this noble trophy of his sport:—

I can say little regarding the death of this tiger, as he fell dead to my second shot. In January, 1861, I left Almorah, a station for a Ghoorka Regiment in the Himalaya, and remained at the foot of the range, at a place called Huldwanee, in order to enjoy a few days' sport before quitting India. My friend Major B—— and myself started one morning for a beat through a favourite part of the forest running along the foot of the outer range of hills, where the sambur, spotted deer, and pig abound, also an occasional tiger. We had bagged five or six sambur, four pigs, and some spotted deer, when, on our way home, I asked Major B. to take a turn to the right through a likely piece of covert, and I would move straight on. In about five minutes I heard the grunt of a tiger—a welcome and well-known sound to all sportsmen in India—and looked towards the direction from whence it came, and, to my delight, I saw this fine fellow bounding across the forest about eighty yards in

front of my elephant. As quick as thought I took up my rifle, sent two shots at him, and over he rolled—one having taken effect in the stomach, and the second in the head, behind the ear. I have killed tigers before with one shot (through the heart), but I never saw one drop so suddenly as this. From the perfect state of the skin, and fine condition of the animal, I should say he must be about twelve years old, and accustomed to the fat of the land in the way of cattle. All tigers that prey upon the human species are generally mangy and out of condition. A brother of mine out shooting along the same line of country, last March, came upon five tigers, all huddled together like a litter of puppies. It was rather late in the afternoon, and after hard fighting three were bagged, one having bolted at first, and darkness prevented the fifth coming to bag, as he was severely wounded, and an hour more daylight must have insured him. I never heard of more than three tigers being seen together, except on this occasion.

In setting up this tiger, Mr. Ward, as it were, composed a picture, which he called "The Intrusion." The position chosen for the beast is that of drinking, or rather, just disturbed from drinking. The water is beautifully represented; it is transparent as crystal; objects can be seen at the bottom, and there is a slight ripple on the surface, as though a gentle breeze were blowing. The beast is standing on rugged rocks, and the leaves of the jungle plants are tastefully arranged about, so as to give the idea of a desert and waste place. The tiger is just looking up from the water, evidently having just heard the approach of his enemies, and is snarling fearfully at his peace being disturbed. However, on this occasion certainly the tiger did not make up his mind quick enough what to do, for he ran out of his fancied security, and was shot dead upon the spot by the gallant Colonel, before (as the Yankees say) "he knew what had hurt him." Lucky it was that the gallant Colonel was able to slay this huge brute with so little trouble, for a tiger is nothing more than a big cat,

and if a cat has nine lives, and a tiger is ninety times bigger than a cat, it follows that a tiger has eight hundred and ten lives, so that it was a lucky shot that destroyed all these lives at but two pulls of the trigger.

It will be recollected that in the International Exhibition of 1862, two very fine tigers, shot by Colonel Reid, were exhibited. Colonel Ramsay's tiger was larger than either of these. I give his dimensions, as taken by Mr. Ward, jun. and myself.*

* DIMENSIONS OF COLONEL RAMSAY'S TIGER.

	Ft.	In.
Length from nose to end of tail	12	0
Length of tail	3	9
Height from heel to shoulder	3	7
Extreme length from shoulder to toe	4	2
From elbow to point of toe	2	5
Girth of body behind shoulders	5	3
Girth of fore-arm	2	10½
Girth of neck	3	7
Circumference of head	3	8
From ear to ear	1	6½
Length of upper canine teeth	0	3
Length of lower ditto	0	1¾
Circumference of upper canines at gums	0	3
Breadth across the chest from head of one humerus to head of other	1	8
Length of claws	0	3

In order to compare these measurements with those of other tigers, Mr. Ward, jun., kindly furnished me with the following :—

AVERAGE SIZE OF TIGERS.

	Ft.	In.
Length from nose to end of tail	9	5
Length of tail	2	10
Height from heel to shoulder	3	2
Extreme length from shoulder to toe	3	11
From elbow to point of toe	2	0
Girth of body behind shoulder	5	3
Girth of fore-arm	2	7

As regards the age of the beast, I believe the Colonel's idea, that he is about twelve years, to be quite correct, backed as it is by the opinion of General —, a great authority on these matters. It is generally supposed that the natural duration of a tiger's life is about twenty years.

It is just as well these tigers should be slain, for the "Burra Bagh," or big tiger, is not only, like all cats, a great thief, but also a murderer as well.* There is a story told of one tiger, who, in six months, killed and devoured forty natives, out of whom sixteen were postmen, these poor fellows being obliged to be out at all times and in all weathers, carrying about the letter-bags. As our own domestic puss knows well enough where the sparrows come to feed, and will sit and wait for them for hours together, so the "Burra Bagh" knows which way the postman will come, and will wait for him as he is walking on his lone journey, spring out from behind some dense bush or favouring rock, knock him down with a stroke of his immense paw, and carry him off to devour him at his leisure. A human being in the mouth of a tiger is perfectly powerless. The strength of a man is naught as compared to that of a tiger; and even should he escape instant death the wounds received often prove fatal.

But the worst of all tigers is the man-slayer, generally a worn-out old beast, whose claws are too blunt, and

	Ft.	In.
Girth of neck	3	0
Circumference of head	3	3

The gigantic proportions of Col. Ramsay's tiger will by these measurements be duly appreciated.

* See Appendix, number of wild animals killed in India.

teeth too much worn down to hold, even if he could catch him, a deer, a buffalo, a sheep, or a goat. The brute, therefore, takes to eating men and women, and especially the latter, when they go to fetch water for domestic purposes. But the brave hunter demands revenge, and he shoots the tiger, and then rifles the murderer's den. What does he find? The old skekarry will tell us.

"This was evidently the hecatomb of the man-eater, for I counted, from skulls and other human remains, about twenty-three victims of both sexes, as we could see from the hair, clothes, broken armlets, and gold and silver ornaments belonging to two native women. We picked up two massive silver bracelets belonging to his last victim, whose remains were identified by the villagers who were with us. We also found two gold teckas, or neck-ornaments, which mark the married women, and a knife which, we were assured, had belonged to a post-man missing about a month before."

We English folk, especially the Ladies, are, I am well aware, always ready to admire what is beautiful, whether in nature or art; and what can be more beautiful than the markings on a tiger's skin, be he dead or alive? The lion's coat is of a sand tawny colour, that he may escape observation when drawing up, in the grey dawn of the morning, on the unsuspecting antelope (there are no true deer in Africa, they are all antelopes). The coat of the tiger is of a very different nature; its groundwork consists of a yellowish pattern, which is slashed, as it were, with long broad black stripes.

Now this is the very coat which is most suited for the dense jungles, where the tiger loves to dwell, viz.,

amongst patches of a shrub called corinda, which is common throughout most parts of India. It is not a tall-growing bush, but its leaves are closely set, and droop so as to form a series of dark leafy tunnels, affording at once delightful shade to the beast. He also frequents the jungle of long grass and reeds, and, when skulking through the dark shade, either of corinda or jungle, it would be almost impossible to make out his huge, but yet cat-like carcase creeping along like a silent shadow.

The marks upon the tiger's head, moreover, are very peculiar. If we ordinary mortals were to have a tiger's head presented to us, from which the spots had been rubbed out, and were to attempt to put them in again, we should probably so dispose them that we should cause the creature's face to be anything but graceful or pretty; whereas Nature's mode of "enamelling" is really a good bit of work, and will stand the closest examination. The New Zealanders tattoo their faces, but make their patterns in more or less spiral form. The patterns on the tiger's face are disposed generally somewhat in the form of a W; and if there be a well-shaped W over the eyes, the more beautiful is the skin in the opinion of tiger-hunters and naturalists.

Anxious to obtain information about certain particulars relative to tigers, I put the following queries in "The Field," and the editor (the late Mr. Crockford) and myself received the following interesting and valuable information from gentlemen who were kind enough to allow their notes to be published.* It is by friends kindly unearthing and utilising the information

* I now quote from "The Field," various dates in 1863.

they possess, that valuable facts, which would be otherwise unrecorded, are made public for the benefit of all.

QUERIES AND ANSWERS RELATIVE TO TIGERS.

No. 1. Are there more than one species of tiger? and what is the average weight of a tiger?

Many native shikaries say there are two species. They describe one as being very long in the body and short in the legs, very active, can make enormous springs, and far more ferocious than the other, but at the same time very rare. Amongst sixty odd tigers, at whose deaths I have been present, there were three which were certainly peculiar in their form. In length they exceeded average tigers, but their heads were very small, and their bodies remarkably lightly made. They greatly resembled the figure of a panther, and I believe they could not have been two-thirds of the weight of an ordinary-made tiger of the same length. I consider, however, that these were merely individual peculiarities, and I have no doubt that it is meeting with odd cases like these which causes natives to fancy that there are two species. It is a fact, I believe, that tigers which live in flat countries are, on an average, considerably larger than those which occupy hilly districts. I have never seen a tiger weighed, but judging from the number of men required to lift a full-grown one, I should think 700 lb. would not be very far from the mark.—J. (Central India.)

I never weighed a tiger, but judging from other game, I should say he might weigh 6 cwt. A camel's load is supposed to be 450 lb., and he has much difficulty in carrying a tiger, even when gutted first, for a short distance; whereas the 450 lb. is his load for a fifteen-mile march. Col. Ramsay's tiger is a very large one, but I have seen certainly three if not four or five larger ones, and have killed one myself, *on foot*, 12 ft. 7 in. long. I have seen two over 13 ft. long. You say, "If the sportsman does not kill the tiger, the tiger kills him." In *some* instances, of course, you mean; but very *rarely* if *perched* atop of an elephant.—M. B., 72nd Highlanders.

With regard to the weight of a tiger, I can only give a rough guess. I remember that on one occasion a large tigress which I had shot was carried off (as it fell) to my tents, a distance of three or four miles, at a

pretty good pace, by eight men. It took twelve men to carry home a large sambar stag, which was shot shortly afterwards, which the villagers stupidly did without first taking out its inside. Having frequently seen various descriptions of deer weighed, I should fancy that the sambar I refer to would have weighed as it fell about 600 lb. So that, supposing that the men were individually carrying nearly the same weight, the tigress would have weighed about a third less, *i.e.*, 400 lb. The tigress I referred to measured $9\frac{1}{2}$ ft. in length; a tiger of the size of the one exhibited in the 'The Field' window would most probably weigh fully half as much again. Shortly after my return from India, I went and had a look at the tigers in the Regent's Park. I noticed particularly that, though fine specimens of their kind, they looked very much thinner than those I had seen a month or two before in the jungles. So that a person attempting to judge of the weight of a tiger in the natural condition, by looking at these, or in fact any other in confinement, would have to add about a fourth to the weight, at least. With regard to there being more than one species of tiger in India, I think there can be no doubt that the tigers which inhabit the Terrai and jungles along the foot of the Himalayas are very much larger than those met with in the hills and jungles of Central India. The latter are frequently called "hill tigers," to distinguish them from their larger brethren of the Terrai.—SINGROWLEE.

I have ascertained the weight of bullocks by the following rule: Measure round the animal close behind the shoulder, then along the back, from the fore part of the shoulder-blade to the bone at the tail. Multiply the square of the girth by five times the length, both expressed in feet. Divide the result by twenty-one, and you have the weight of the four quarters in stones of 14 lb. In very fat cattle the weight is about a twentieth more than that ascertained in this manner; while very lean cattle weigh about a twentieth less. The quarters are little more than half the weight of the animal. The skin weighs about one-eighteenth, and the tallow one-twelfth of the beast. You could ascertain the weight of Col. Ramsay's tiger by this rule. You have not given the length required, or I would have sent an approximate weight.—R. GREENWOOD. (Kilkhampton, Stratton, Cornwall.) [A gentleman who has examined the tiger, guesses his weight to have been 44 stone, or 616 lb. at 14 lb. to the stone.—FRANK BUCKLAND.]

In regard to the size, I do not think there is anything to denote a distinction; though the size of the Bengal tiger has generally been considered to be greater than that found in Upper India, and more especially in the hilly tracts of Central India; but Col. Ramsay's specimen is a proof that in all parts they do attain a very great size occasionally. The colour of the skin as a rule indicates the age; a very old tiger becoming

quite pale, and a young full-grown one is always of a deep colour. India, you must recollect, is a wide region.—C. B.

SIR,—Seeing a question by Mr. Buckland in 'The Field' about the weight of tigers, perhaps the following information may be of some service:—I weighed two tigers at the Quartermaster's store, 8th (the King's) Regiment, at Camp Decsa, Guzerat. One on the 21st of March, 1852, 329 lb.; the other on the 11th of February, 1853, 452 lb. The latter the largest tiger I saw in India.—A. S. G.—P.S. Both tigers were killed about three p.m., and weighed about six a.m. next morning.

We find tigers in this country up to the foot of the Himalaya Mountains, and south as far as Ceylon. Their weight, of course, varies with their size. There is a very large one at a place called Sukkar, on the Indus, and which one I saw on my way down here a fortnight ago. The natives in charge of him say it weighs 425 lb., is 10 ft. $3\frac{1}{2}$ in. long, and $37\frac{1}{2}$ in. high at shoulder. He is of a very deep or dark yellow, and a "most perfect head," although the "W" mentioned in your paper was not distinct. The white parts were milk white, and the jet-black spots on the dark-yellow grounding had a most handsome effect. His whiskers had not been cut, which perhaps accounts for his being taken by that great tiger shikarie, Major Marston. This animal, I may as well mention, is held sacred by the natives, and a fakoeer, a native priest, is the head man who looks after him. He is kept in a large enclosure, and appears quite docile, as we (myself and party) patted him and caressed him. He is nine years of age. I am in hopes of bringing home a young one, together with my three leopards, the marks of which I consider far handsomer than the large stripes of the tiger. You can never judge the correct dimensions of these or any other animals after they are skinned, as they can be, of course, made to stretch so much. They should be measured when the animal is alive, and it is seldom that you are able in England to get or see them so tame as to permit you to put them in the different positions for measurement, and when it is the only time you can get anything like a correct measure. My large leopard, who is just one year old, is 6 ft. $6\frac{1}{2}$ in. long, 21 in. high at shoulder, foot 8 in. circumference (when extended much more), $26\frac{1}{2}$ in. round body under arm, 20 in. round head over the ears, $\frac{1}{2}$ in. claws, 14 in. elbow to toe; is beautifully marked, and fetches and carries stones or sticks out of water. They are quite different from cats in that respect, being very fond of the water. I have had seven since I have been in this country, and at all ages, and find that, however tame they may be made, they never can be relied on. My two other little ones are unfortunately both females, and I am afraid there will not be enough food for the three on board ship, so will have to leave the large one (a male) behind. You can teach them to catch deer at any age, although it is of course better when they

are young, and also easier.—A. C. KEYS LOCKE, Capt. 51st Light Infantry (Kurrachee, Scinde, April 4).

The longest animal I remember to have seen during my residence in India was a male royal Bengal tiger, shot by the late gallant Major-General Sir W. R. Gilbert (the hero of the Punjaub in after years). It was in the year 1825, when that officer was residing at Balasore. This tiger was a confirmed "man-eater," and was killed off an elephant in the heavy jungles of the Huddlerpuddah, in the zillah of Midnapore. He measured 12 ft. 2½ in. in length. A tiger was brought into the presence of Mr. Campbell, an indigo planter, at Jellasore, in the same zillah, which had been killed by two "shikarics" (native hunters) with matchlocks whilst in the act of slaking his thirst from a nullah in the great Mohur-bunge (peacock forest); his length was 12 ft. 2 in.—D. G.

No. 2. What are the extreme limits of the geographical range of the tiger?

— I have just read Mr. Buckland's article in 'The Field' on the geographical range of tigers. In General Ferrier's 'Caravan Journeys,' page 138, he mentions that the tiger is sometimes seen in the country near Karig, a village on the boundary of Persia and Herat. In Capt. Langley's book, 'Residence at the Court of Meer Ali Moorad,' he mentions the fact of Meer Ali having killed tigers near this capital town (of which I have forgotten the name) in Scinde. This looks as if the tiger was not confined to India alone.—R. A., Akolah, West Berar.

I send you a tracing of the zoological chart of the world, published in 'Black's Atlas' of 1857, from which it appears that the limit of the so-called Bengal tiger is from about 10° south to 47° north lat., and from 44° to 136° east long.—H. R. H.

I do not think that tigers are found further west than the north-west boundary of our Indian possessions, or further east than the western boundary of China. You sometimes read of tigers being killed in Africa and South America, but they are a large species of panther, with spots or circular marks, not striped like the tiger of Bengal.—SINGROWLEE.

When talking "tiger" matters over at a dinner-table, my friend, A. H. Layard, Esq., M.P., informed me that there was a range of hills running northwards from the Gulf of Cambay towards Delhi, and that this seemed to be the westernmost limit of the tiger; though it is reported that tigers have been seen in the province of

Mazanderan, to the south of the Caspian Sea; the country there is very thickly wooded. They are not found at Teheran, the capital of Persia.* As regards there being a second species of tiger, we have pretty good evidence that there really exists another variety, which has not smooth hair, but has a *rough hairy* coat. This creature is to be found, and it is hoped skins will eventually be brought (even if a skin exhibited some years since at the Zoological Society be not that of the very animal in question). This hairy tiger is said to be found at and about the north-eastern extremity of the great Chinese wall, and also in the Corea—the peninsula between the Yellow Sea and the Sea of Japan—a country about which as yet we know positively nothing whatever. This hairy tiger is said by my late (alas!) friend, Dr. Falkoner, to be nearly related to, if not the same as, the extinct fossil tiger, *Felis spelæus*. I trust we shall get a specimen of this most interesting animal some of these days.

No. 3. Why do the natives pillage the whiskers, claws, and fat of the dead tiger? If they use them for charms, against what particular evil are they supposed to be efficacious?

The natives burn tigers' whiskers, not as a species of insult, but because they imagine they are deadly poison. They firmly believe that a tiger's whisker chopped up and introduced into any one's food will assuredly cause his death. I have heard them mention the names of people supposed to have been poisoned in this way. To prevent the

* By the map, I find that the province of Mazanderan is about one thousand miles, as the crow flies, from the western extremity of the Punjab.

possibility of being themselves put out of the world by this method, they destroy the whiskers as soon after the tiger's death as possible. The claws they hang round their children's necks as a charm against "evil eye." Natives fully believe that many individuals have the power of casting the evil eye, and they are as fully persuaded of the efficacy of this charm. Tiger's fat they consider a cure for rheumatism, and the smoke of burnt tiger's meat as a remedy for many other diseases.—J., Central India.

On one occasion, when I had been fortunate enough to bag three tigers, on their arrival at the tent a large number of natives collected round to look at them; my shikarie, however, would not allow any person to come near them until he had first singed off the whiskers of the tigers. When I remonstrated with him, and asked his reason for disfiguring them, he replied that they always made a point of doing so to prevent any malicious person getting possession of the whiskers, as the bristles chopped up and placed in a person's food would bring on internal inflammation and cause their death. Not being a medical man, I cannot say whether it would be likely to have that effect or not.

The claws are worn by children as charms, and are supposed by the natives to ward off all manner of evils. I never saw them worn by grown-up persons. The oil made from the fat is considered a good remedy for rheumatism, and the flesh, if given to a child to eat, is supposed to make it very strong.—SINGROWLEE.

The whiskers are considered a most deadly poison; and it is almost impossible to avoid their being pulled out or singed off, to prevent their being made use of by some enemy. As a magistrate, I have received petitions informing me that such a person was in possession of tiger whiskers, and praying that they should be taken away, &c. If you question a native about them, he can give you no distinct notion of how they are to be used, though I have been told that the hairs are cut up into small pieces, and so given in bread, from which death is sure to ensue. The claws of the tiger are much prized by all classes, from the highest noble or richest banker to the most lowly; they are supposed to keep off the evil eye, to prevent fever and other ailments. You generally see them worn, set in gold, round the neck of the young son and heir of the family. The claws of the last tiger I shot, about three years ago, were eagerly begged of me by some of the first nobles in the Punjaub. The skin of the same animal was ruined as a specimen, though now in my drawing-room, by the whiskers being pulled out whilst I had turned my back for a few minutes. The fat of the tiger is, again, much prized to rub into the back and to make men lusty! Again, the tongue or a bit of the heart is frequently given by elephant drivers to the elephant they have charge of, to make him fearless.—C. B.

The natives burn the whiskers from superstitious motives. They use the claws as charms, hanging them by a string round the necks of women and children. Thus used, they are supposed to do 'almost anything—bring luck, produce children, keep off tigers—according to taste of wearers.—M. B., 72nd Highlanders.

By 'The Field' of the 12th inst., it appears to me that very few, even amongst old Indians, know the real reason why the natives of India are so anxious to secure the whiskers of a tiger. If allowed, I will now, through you, give them the required information, which is as follows: A native imagines that should he by any means be able to get a man to take internally, by way of food or any other mode, a portion of a tiger's whisker, he (the administrator) will be able to obtain with impunity the power generally attributed to a love-philtre, and the person so operated upon, *i. e.*, who has swallowed the whisker, will be utterly unable to prevent or punish the offender. It is well known that the natives of India are prone to intrigue, and they never lose an opportunity (either by fair means or foul) to possess themselves of these whiskers, which, when once obtained, they keep carefully by them till some beauteous dame finds favour in their sight. Then comes the time to show off their skill in administrating the whisker. The whiskers of leopards are also sought after, but are not supposed to be so infallible as the tiger's. The claws of a tiger are simply looked upon as a charm, and are generally worked up in silver or gold, and worn round the neck to keep off an evil eye.—JUNGLE HUNTER.

The superstitions regarding tigers, as about other things, vary in many parts. At some places the whiskers are instantly burnt off, to prevent the tiger's ghost haunting the village near which it has been killed.—C. B.

The natives have a superstitious belief, that unless the whiskers of a tiger are singed off immediately after he is killed, they will be haunted by his ghost. So says Col. Campbell, of Skipness, in his 'Sporting Journals,' now passing through the press. Col. Ramsay's tiger appears to be a fine beast; I have only once heard of a larger animal. Lieut. Rice mentions that the largest he ever killed or saw measured 12 ft. 7½ in. from nose to tail.—D. D.

When the shikaries bring their tiger spoil before the "collector of the zillah" in which the beasts of rapine are destroyed, they receive by custom 100 sicca rupees for the same, whilst the tusks and talons are abstracted from the heads and feet of the beasts, and consigned to capacious chests in the collector's cutcherry (treasury). In those chests, at Midnapore, some bushels of the above dental relics have been deposited from time to time, as they have been brought in to the collectors by the hunters.—D. G.

The natives believe the tiger's whiskers poisonous in another way not mentioned in any of the answers given. It is this : a portion put into the chilluw a man is smoking will prove fatal to him. The claws, I have been told, when hung round a child's neck keep it from starting in its sleep. A chief in Scinde, who brought twenty armed followers to beat for tigers, condescended to walk off with my share of the fat, which I intended to keep for a friend. Natives have been known to follow an officer from Kurrachee up the northern frontiers of Scinde, in hopes of getting some tiger's fat. It is considered a cure for rheumatism, and when rubbed in is said to cause an eruption of the skin. The tongue of the hyæna is also prized by the natives of India. They believe it possesses the power of dissolving fish-bones that stick in the throat, and also that the saliva of the hyæna melts bones.—GEORGE MONTGOMERY (14th Regiment, Ahmednugger, March 26).

It will scarcely be believed, but there are superstitions almost equivalent to those prevalent in India still existing in this great metropolis, for an application was made not long since to my friend Mr. Bartlett, for some hair off the back of a lion, which a woman asked for in order to give a child to drive away fits. Again, it will hardly be credited, but still it is a fact, that not very long ago a book was published in London advising the administration in consumption of the actual copros (or dung) of various snakes, that of the boa-constrictor and the warning lizard of the Nile being particularly efficacious. The idea of a hyæna's tongue being a solvent for bones, is evidently founded on the fact that the hyæna has amazing power of cracking the bones of animals with his tremendous teeth—an important bit of evidence as to the condition of England when hyænas lived in the caves of Yorkshire, Cotswold Hills, Devonshire, &c. The hyæna, too, has also the power of digesting the bones after they have been swallowed, as the examination of the *album græcum*, found in the dens of captive hyænas, will amply prove; or, as the

late Phil Duncan wrote, when describing my father's discoveries of bones at Kirkdale Cave of the ones of the "last British Hyæna"—

Potent his jaw to crack his bony rapine;
Potent his stomach as pot of Papin.

COLLAR-BONES OF THE TIGER.

By the kindness of a reader of 'The Field,' I received four little bones, described as the "floating bones" from the tiger's shoulders; my correspondent stated they were sent to him some years ago by an Officer of the Civil Service. The largest were taken from a very fine tiger. There can be no doubt whatever that these are the undeveloped clavicles or collar-bones of the tiger, to which an allusion, as "floating bones," was made by Capt. Montgomery, in his interesting letter from India on the subject of tigers. The largest of these clavicles is but two and a quarter inches, and not quite half an inch in the distal extremity, which tapers almost to a point. I sent these little bones to the Royal College of Surgeons for comparison with the preparations in the museum, and the following was the answer received:

Both the lion and tiger have the "clavicular bone," as so called by Professor Owen in the catalogues, and there is no doubt about the two bones you showed me being clavicular bones. The specimens of lion and tiger in the museum here have the bone on one side only; no doubt the other one was overlooked in the preparing them for maceration.

The bones are about as large, and somewhat of the shape of the merrythought of a fowl. This merrythought of the bird is indeed nothing but a true clavicle. We

find the clavicle fully developed in our species, where free use of the fore limbs is absolutely necessary for the existence of the creature. The tiger is an animal that uses his fore arms very frequently, and, as many of my readers know, some time to great effect; therefore this animal is provided with a clavicle, but, strange to say, nature has not developed it, except in a very minute degree. The tiger, I believe, is unable to climb trees, and I cannot help thinking that one of the reasons he cannot do this is that his clavicle is so exceedingly small in proportion to his stupendous muscular development and the massive conformation of his bones.

In the books of natural history to which I have looked, with reference to the presence of collar-bones in the tiger, no mention whatever is made of the fact, except by Professor Bell, who, in his Bridgewater Treatise on the Land, writes as follows: "There is also a certain degree of freedom in the anterior extremity of the cat, dog, marten, and bear; they strike with the paw and rotate the wrist more or less extensively, and they have therefore a clavicle, though an imperfect one. In some of these, even in the lion, the bone which has the place of the clavicle is very imperfect indeed, and if attached to the shoulders it does not extend to the sternum; it is concealed in the flesh and is like the mere rudiments of the bone; but however imperfect, it marks a correspondence in the bones of the shoulder to those of the arm and paw, and the extent of motion enjoyed."

The subject of clavicles or collar-bones may not be very interesting to some of my readers, but it ought to be so, especially to the ladies, for, according to Sir

Everard Home, the reason why French ladies carry themselves better, and "claim a superiority in the art of showing the beauties of their persons with more grace than the English," is that the collar-bone in English-women is shorter than in the French; this throws the blade bones to a greater distance and opens the chest, giving a greater breadth to that part of the person. Sir Everard states that he measured the collar-bones of seven French ladies, and found them to vary from five inches and a half to five and three-quarters and six inches, whereas the collar-bones of English ladies did not exceed five inches; the ladies, both French and English, being five feet four inches in height.

ZOOLOGICAL AUCTION.

SALES of large animals, such as are generally kept in menageries, are not very common in England; but I was once lucky enough to be present at what may, in the strictest sense of the words, be called a zoological auction. I have been present at auctions of many kinds; I have seen a single gold coin,* the size of a five-shilling piece, sold for two hundred and sixty-five pounds at Sotheby and Wilkinson's. I have seen a fossil sprat sold for as many sovereigns as it had ribs; but I never

* I wrote to my friend W. S. Vaux, Esq., to know what this coin really was that I saw sold, and why it fetched such a high price. He kindly sent me the following answer:—"The coin you allude to is what is called 'the Petition Crown.' It was made as a pattern for the coinage of Charles II. by *Simon*, A.D. 1663, when he had been dismissed from his office of coiner, and a Dutch artist, Poettier, had been employed in his place. These 'Petition Crowns' are usually considered the gems of the English coinage, and as there are but very few extant (I believe about fourteen or fifteen) they always fetch a very high price when sold. We have two specimens in silver, and one in lead. The latter is nearly if not quite unique. If you want to know more about them, you will find a good account of them in *Virtue's works of Simon*, Plate xxxv., Fig. 7, and *Evelyn's 'Discourse on Medals,'* page 239.

was present at a more interesting auction than that held at the Surrey Zoological Gardens, when the whole collection of animals belonging to that establishment was brought to the hammer.*

It was a dull misty morning when I entered the gardens, some few minutes after the sale had commenced, and they looked the picture of wretchedness. The model of Sebastopol, whose cannon lately thundered simultaneously with the cannon of its prototype far away in the Crimea, was now silent; the wooden Zouave and the wooden Guardsman, wearied with the long siege, were standing at anything but 'tention—all was ruin and desolation.

Not far from Sebastopol the auction was going on; the head of Mr. Stevens, the auctioneer, forming a centre round which the crowd was collected. "Eight shillings for a wax-bill and two cut-throat sparrows. Yours, sir," were the first words that met my ears. "A paradise grakel—nine shillings—thank you, sir. The next lot—a red and yellow macaw. No. There is some mistake—a yellow and blue macaw. What shall we say for this fine bird, gentlemen? Three pounds five—you have a bargain, sir. A sulphur-crested cockatoo—two guineas—mind your fingers, sir; that lot is spiteful. The next lot—an armadillo—what shall I say for the armadillo, gentlemen? Ten shillings?—thirty?—yes, that's more like its value. A pair of flying squirrels—one pound—cheap as things go. Now for the snakes." There were only five snakes for sale, and these all boaconstrictors; one came from South America, the others all from India. The Yankee was bought for five

* The sale took place in the month of November, 1856.

guineas, the others at prices varying from two to four pounds.

The sale was a peripatetic one, and the auctioneer, having descended from his chair, we all followed a man, who carried the chair in one hand and rang a bell with the other.

During the walk from place to place I had time to look about me at the company. There were about five hundred people present, who consisted firstly, of a deputation from the Regent's Park Gardens; then several professional animal dealers, among whom was Mr. Jamrach, of Ratcliff Highway, before mentioned, one of the largest animal dealers in the world; then proprietors of shows, both great and small, from the Messrs. Wombwell to your scantily clad man who owns the penny show, and who has just bought the smallest and the cheapest of the boa-constrictors, to be shown to gaping villagers at country fairs; lastly, many who, like myself, came to learn the value of an elephant or a lion. We crowd of naturalists, therefore, the bellman showing us the place, halted in front of the aviary. The first lot was two Indian falcons, which fetched two pounds ten shillings each. Then a pair of white (or rather whity-brown) storks,—they sold for sixteen shillings. A black stork (being like another black bird well known to schoolboys, a rare bird) brought two pounds six shillings. Then followed lot fifty-seven, a pelican, a very amiable, or else a very hungry bird, for he kept jabbering with his great bill at the numerous gloves held out to him, and endeavouring to swallow them. Here a spirited competition began, and the bird was at length knocked down for eighteen guineas. In

Egypt, a friend informs me, he lately bought a much finer bird for two shillings, which makes me think seriously of speculating in pelicans. The reason why a pelican sells well is, that he is a good show-bird, and a good attractor of pennies. He is probably at this time shut up in some small cage, inside a house upon wheels, never again to behold his native wilderness, or, according to the showman, his master, pluck blood from his breast to feed his young ones. A very common exhibition in travelling menageries, where they have one or two pelicans, is to put a bucket containing fish at one end of the show, and then to allow the hungry pelicans to make a rush at the bucket from the other end; this is what is called "a Chinese goose race."

Next came the monkeys. Great was the rush to the monkey-house, which was speedily filled, but as speedily emptied again; for Mr. Stevens wisely took up his position outside, under cover of the wooden guns of one of the Sebastopol batteries. But though the folks were so anxious to see the monkeys, they did not seem equally anxious to buy; for the biddings were few and far between. The first lot was a Rhesus monkey—a fine name for an ugly creature. He was sold for twelve shillings, as also were two more of a similar species. Then followed divers sorts of monkeys rejoicing in divers names, such as bonnet, green sooty, macaque, &c.; but none of them fetched more than ten shillings each; and one of the customers wanted Mr. Stevens to give him an organ into the bargain. Another wanted his monkey—a great savage Barbary ape—delivered immediately, which Mr. S. said he really could not

undertake to do, but he would be happy to receive the money for him on the spot.

Away we went again after the bell and the chair, to the opposite side of the gardens. Here, two jackals were the first sold—twenty-four shillings the two. Then a pair of porcupines—good show animals again—eight pounds fifteen shillings. Then an Indian goat, one four-horned sheep, and one Indian sheep—only two guineas the three; cheap, at that rate, even as mutton. Then followed a red hind—(who nearly devoured my catalogue while I was looking another way)—for two pounds ten shillings. Then followed the sale of six eagles, namely, two golden eagles, a wedge-tailed eagle, a sea eagle, and two from Chili. These sold at prices varying from two pounds to thirteen shillings; and some of the lot, if I mistake not, are by this time full of hay and tow, with glass eyes in their heads.

The next lot was a hybrid (between a zebra and wild ass): this spiteful brute sold for eight pounds. He was formerly the property of Lord Derby, and when brought up per train from that sale kicked the horse-box to pieces and did ten pounds' worth of damage, so that he was dear at any price. A fine ostrich sold for twenty-seven pounds, and a nylghau for nine pounds, both fair prices.

Then came the lions and tigers. The first, a fine tigress, sold for seventy-nine guineas, not her value; the second, a very fine lion, for two hundred guineas; Just as the hammer was going down this noble brute stood upright in his den, and looking sternly at the crowd gave a roar of indignation—a fine study for an artist.

"Next we will proceed to the elephant," exclaimed Mr. S. The folding doors opened, and gently led by his keeper, the elephant came forth. Sad and demure the poor beast looked, never again to draw his cart full of happy, smiling children round the gravel walks, receiving biscuit contributions from his young employers.

"Trot him out," cried a bidder, as two hundred guineas were bid.

"By your leave," cries the keeper. The crowd cleared away, and the elephant made a sort of a mock trot. His price went up in the market immediately, and he was finally knocked down to Mr. Batty, the circus proprietor, for three hundred and twenty guineas.

After the elephant came the camels, male and female; being stupid, they looked stupid. Nevertheless, the male was knocked down for sixty-two pounds, the female for fifty pounds, to Mr. Edmonds, for his menagerie. Lastly, came the giraffe. It was too cold for him to come out, and his house was not big enough to hold the good folks present, so that while he was pacing his stall in solitude, the figures two hundred and fifty pounds were put down opposite his name on the catalogue outside. He was bought in I believe. This poor beast was soon afterwards taken to the docks, to be put on board ship, to be sent to the continent; while he was slung aloft in the tackle the ropes broke, and the unfortunate giraffe fell on the deck of the ship and

* From one to eight elephants come over every year; the young ones are the most valuable, because they eat less, and can be more easily trained. There is not now a large elephant in England. A good tusker is worth £1000, and fifty buyers for certain; a dead elephant is worth £20 any day.

fractured his spine. He fetched, however, the sum of twenty-five pounds as a dead beast.

The last lot was the five bears—the first one, certainly as fine a specimen of a brown bear as we ever saw, sold for only six pounds six shillings. The next, also a brown bear, nearly as big, for five pounds. The other two for four pounds and four pounds ten shillings. Poor things! They also were probably defunct soon after the sale; for they were all bought by an eminent hair-dresser in the City.

Not long since there was a certain barber, who lived in Hampton Street, Walworth Road, who did a good business in bear's-grease, and all this with *one* bear, which same bear he killed *three times a week*. He kept the bear in an area, where he could plainly be seen by the passers-by. He was a tame creature was this bear; the proprietor used to feed him with meat, placed on the end of a long stick, to make believe he was very savage; yet the little school-children, from the neighbouring "penny a week school," used to buy buns for him, and feed him with their fingers through the bars of the area, for the poor brute was half-starved. The children, sharp as children always are, were not taken in when the proprietor advertised, outside the shop, "another bear just arrived."

In order to carry out the trick, the barber simply took the poor old bear, and by means of flour and grease made him into a "grey bear," or he blackened his coat and made him into a "black bear."

Yet the children always knew their old friend, who had but one eye, and that a regular "piercer;" nor could they fail to recognise his old moth-eaten coat, even

when invited to come and see "the pretty new bear," who, strange to say, poked his mouth, "with the broken tooth in it," up to the bars of the area, as had been his wont for between five and six years. At the appointed day, when the bear was advertised to be killed, the poor beast was made to retire from the area; and shortly afterwards were heard, proceeding from under the barber's shop, the most dreadful yells and roarings, followed by groans as of the poor bear in the agonies of death. At last all was over, and the bear's cage was brought out (apparently empty) and taken off to the docks. A dried head and skin of a bear were duly hung up in the shop window, a plain proof that a bear had just been killed for grease.

The next morning another bear was brought back from the docks, and deposited in the area, in his turn to be killed, and so on.

But the truth was at last discovered. There was a certain Jew fishmonger, who went by the name of "Leather-mouthed Jemmy," on account of his tremendously powerful voice. This man was hired on bear-killing days to produce the roars and groans of the dying animal, which he did with a wonderful accuracy. On one unfortunate day the hair-dresser would not give the accustomed fee of five shillings. Leather-mouthed Jemmy immediately told the whole conceit, and the hair-dresser was obliged to shut up his shop, and sell his only bear, that he used to kill three times a week, for what he would fetch, to the rival barber over the way.

"A HAPPY FAMILY."

TRUE and genuine felicity is a rare treasure among human beings, and few there are amongst us who really enjoy this blessing. Diverse are the dispositions of members of households, opposite their tastes, different their tempers. Rare indeed is a "Happy Family."

I never met with but *two* in my life. One was on Waterloo Bridge, some years ago; the other in a booth in Windsor onion fair. Oh, Happiness! Happiness! you are denied to men, but granted to a miscellaneous collection of birds of the air and beasts of the field. The origin of Happy Families is I believe this. It is recorded in the annals of the parish of Lambeth, that one Charles Garbett, a poor labouring man, had once upon a time a favourite cat; that this cat was robbed of her kittens, and that her maternal affection was so strong that she, in her desolation, took to her affectionate breast a litter of young rats, having either frightened away or else devoured the rightful parent of these poor orphans. She nourished these young rats, she reared them with affection and care till they arrived at rat-hood.

Here was a fact—a great fact. Charles Garbett was a philosopher in his way ; his cat, like Whittington's, was the pioneer to fortune ; he seized the idea—he exhibited his cat and rats. He thought, if a cat will make peace with a rat, a hawk will make peace with a pigeon. Then followed a series of experiments, long and tedious, resulting in what?—in a fact which we men and women can hardly attain to, viz., a "Happy Family." The secret of conferring happiness upon families is now in the possession of the son of Charles Garbett ; he received it as an heirloom, an hereditary fortune from his father, and for many years he reaped the results of his patient care and observation.

The reader will like to be introduced to this family. The fee of admission is one penny, with privilege to converse with either or all of them. In a large cage, many wires of which are broken (but not by turmoils in the family ; oh, dear no !), we see the following.

Imprimis : The self-constituted commanding officer, Jock, the raven, a fine handsome fellow, with such a glossy black coat, such an eye, such a sharp beak to keep due and proper order. Then we have four monkeys, two cats, four pigeons, three hawks, two ducks, four guinea-pigs, two ferrets, two rabbits, thirteen black and white rats, one cock, two hens, one badger, two kangaroo opossums, one hare, one racoon (who has seen thirteen years' service, and who has gone blind), and three dogs—Rose, Tom, and Limpy. These latter are chosen, not for their beauty, nor yet for their ugliness, but for their malformations. Tom has three legs in front (an extra one growing out of his chest), Rose has three legs behind and two in front, and Limpy has but

one leg behind, with no trace of a second; she therefore "goes limpy," as her name implies. These unfortunates have not been in any way mutilated or disfigured; they are all natural 'cripples, but very good-natured cripples withal, with free use of their tails, which they wag freely in welcoming the visitors.

It was supper-time when I made my call on "the family;" there were sundry slop-basins filled with capital bread and milk, placed in the cage; round one basin were sitting three monkeys, the two ferrets, and a guinea-pig, each and every one of them eating for their lives. The *monkeys' allowance* in this case was decidedly the best, for the rascals took out first one handful and then another, and thus filled, not only their mouths and stomachs, but also their pocket-like pouches in their cheeks, which were full to distention. *They* lost no time—they were eating and stealing, stealing and eating, as long as there was anything to eat or steal; the poor ferrets could only take single mouthfuls, and their sharp teeth did not seem at all good instruments to pick up soft bread and milk; they reminded me of an Englishman eating rice with Chinese chopsticks. The guinea-pig was not big enough to reach well over the basin, and therefore every now and then tipped it over for his own special benefit. In the rear of this supper-party was the duck, who every now and then, reaching over the whole party, thrust her long neck forward and gobbled up a good bill-full, in the very face of the supper-party.

One of the monkeys had a private meal served all to himself; he had been doing duty all the evening outside the show, in company with the racoon. These

were the decoy animals, placed as sentries on each side of the door, to attract the attention of visitors, and cause an influx into the exchequer. The monkey was the show monkey, the best-looking of the lot, but apparently spiteful. On offering to shake hands, he showed his teeth and began a long chattering conversation, with sundry demonstrations of animosity. His master, however, assured me that "he was the biggest bounce in England, and would not harm a fly."

There was lately in "the family" just such another monkey, who could not be prevailed upon to take any food when offered. It was soon observed that this creature's great characteristic was thieving; kleptomania (as the love of thieving is now called) was strongly implanted in his mind. So great a thief was the beast that he would not eat anything *unless he stole it*. His master therefore pretended to hide his dinner from him, and, when nobody was looking, master monkey would come and steal it, and enjoy it, which he would not when placed before him in a proper monkey-like manner.

Thieving propensities, whether in man or beast, always sooner or later bring the owner of those propensities to grief. One day the master was painting the van with red paint, which he placed for security's sake in concealment. The kleptomaniac monkey was watching all the time, and when the coast was clear made a meal of the red paint, which gave him such a fit of indigestion that he became a dead monkey—a warning to all thieves, whether biped or quadruped. The monkey members of "the family" require great care at the fall of the year, they suffer so much from cold. I

saw one of them retire after supper from the bread-and-milk basin, with a ferret, which he nursed in his arms, and the two coiled themselves up together as snug as could be. The master always "takes the monkeys out of the cage on cold nights, and puts them in a box together, where they warm one another, which is as good as anything." The monkeys also suffer much from bad tails; the tip becomes dead and mortified, and the result of Mr. Garbett's experience is that it is no use trying half measures, and that amputation is the only remedy for the disease. He therefore puts the monkey, in spite of his remonstrances, into a bag, leaving the tail protruding. With a sharp knife he then separates the skin up as high as the joint of the diseased portion, and cuts it off. The bleeding he stops with a hot iron. He then brings the skin over the wound, applies powdered resin, and a top-dressing of bitter-aloes, in order that the monkey shall not lick the wound. "After the operation, by adopting this plan," said the father of this "happy family," "I never has no difficulties with my monkeys' tails, though I has sometimes with their manners."

Kleptomania, or the love of stealing, is a passion so firmly inherent in the monkey family, that it would seem that no monkey can enjoy anything unless it has been attained by furtive means.

I lately had a little monkey, who was such a great thief, that if he had been a human being he would have been transported over and over again for numerous acts of petty larceny. I, however, turned his thieving propensities to good account. Master Jack (after I had had him some time) showed evident symptoms of phthisis,

or consumption, and I prescribed cod liver oil. It was placed openly before him, on the dining-room table, but he refused it with symptoms of disgust and sundry tail-shakings. I then poured a little into a saucer, and placed it in such a position that master Jack should find it for himself, while I pretended to be reading and not to notice what was going on. The trap took; Jack, thinking that he was *stealing* the oil, sucked up the prescribed dose, making a face, not implying nausea, but rather high glee at his own cleverness.

This "deceit," however, was after a time discovered by the artful creature, and one day I found my friend with his long tail and arms tightly coiled round the table lamp, and stealing the colza oil as it dropped down from the wick. He managed to get one of his long spider-leg-like fingers through the brass work of the lamp, and held it till a drop of oil fell on it; he then put it in his mouth and sucked off the oil like a child sucking sugar candy. How he could manage to gaze at the intense light, which one would have thought would have hurt his eyes when so near the lighted wick, I know not. I fancy however that the light bothered him somewhat, for he used to frown dreadfully while he was waiting for the oil to drop on his finger. (See engraving.) I placed colza oil before him; no, he would not touch it; but nevertheless he had no objection to it when he stole it for himself from the lamp. He was certainly better and fatter for his medicine, which was so sweet because stolen, and I really think it saved his life. The engraving by Mr. Carpendale represents Jack taking his medicine.

Jack, too, had a marvellous propensity for picking

things to pieces, and smashing articles that came in his way ; strange to say, he never tore a useless bit of paper, or broke a common or valueless bit of goods. One day he sneaked out of his cage, and had a good morning's work to himself, tearing off the leather and pulling out the lining of an old arm-chair. • He was, after an hour or two, discovered in the act, and taken into custody to be duly chastised for his mischief. He cried "murder" when he saw preparations made to punish him, but at the same time he held out his hand, firmly closed upon something in it. His pickers and stealers were unclasped, and in the palm of his hand was discovered a half sovereign, which he had most certainly found and picked out of the chair, and which probably had been buried in the lining of the chair (an old second-hand one) for years. His proffered ransom got him off his punishment, but his investigations into the structure of watches, books, ink and cruet stands, writing desks, MS. notes, &c., have not since produced equally valuable discoveries.

Nothing pleased Jack so much as to make his escape, Jack Sheppard fashion, from the wire cage in which he was kept by the kitchen fire. He would pick and pick, with his long skeleton-like fingers, till he found the staple loose. If anybody happened to look round at him while he was at work, he would drop instantly on the hay and pretend to be asleep. When he managed to get the door unfastened, he would not bolt out in a moment, but push it open as gently and gradually as a burglar. He would then sneak out, and the cunning rascal would carry his chain on his tail to prevent it rattling on the stones and the servants detecting his

pranks. His object was to get to my room, and on looking up I frequently found my friend nestled inside the fender. He came into the room so quietly, that I did not know he had escaped from his cage till he called my attention by a friendly chatter, as much as to say—"I've got loose so cleverly, you really must not scold me for it."

When winter came on I always had a coat made for him, which was sewed on at the back like a lady's stays, or he would not rest till he had unpicked the stitches and got it off. As it was sewed at the back he could not get at the stitches. Jack's tailor was the regimental tailor of the Second Life Guards. When the tailor made him his first coat he made him the coat of a Troop Corporal-Major, putting the crown and four stripes on the right arm. Jack soon set to work and pulled off the crown, and then one by one the stripes. The coat was sent back to the tailor for repairs, and when it was returned we found that Jack had lost rank, for he had now only three stripes on his arm, and was therefore a full Corporal. These he destroyed, and he was then reduced to two stripes, and made only a Lance-Corporal of horse. The punishment however did not take much effect on Jack, for he at once deliberately set to work to destroy his kit. All hopes were then given over, and Jack was reduced with disgrace to full Private, with no stripes at all, and he remained full Private the rest of his days.

Jack was a little South American Capuchin, so called because the markings on the head are not unlike a monk's cowl. I bought him of Jamrach, who called him a "Musk Monkey." Even though he did not smell of

musk, there was seldom any unpleasant odour about him. Should any of my friends wish to have a pet monkey, let me advise them to get a South American monkey and never an Old World monkey; the American-monkeys are three times as intelligent as their non-prehensile-tailed relatives.

The activity of my monkey was something extraordinary. He knew well enough when the orders were given to take him to bed, and move him from his comfortable corner under the fender—he was a lazy rascal, and did not like going to bed early or getting up before eleven o'clock in the morning. When bed-time arrived, if not immediately secured before he was aware of his coming fate, he would cry like a naughty child; he was off like a bird, and catch him if you could; no art, no inducements, no devices ever so cunningly used, would induce him to come within arm's length, and it was sometimes half an hour's work to get him at all.

If it be so difficult to catch a monkey in a room, how much more difficult (I thought to myself) must it be to catch the wild monkeys out of the lofty trees in their native forests, for exportation. I therefore put the following query in 'The Field.'

"I should feel most obliged if any of the correspondents who live in monkey countries would kindly tell us how the monkeys that are brought to England, France, Germany, &c., are caught. Are they taken when quite babies, or are traps set for them; and, if so, of what kind? It has always been a puzzle to me to know how the natives can possibly get hold of them, except as quite little things; and even then they must have been difficult of capture in the open forest, and troublesome

to rear afterwards. I should much like to see a trap that would catch a monkey alive and uninjured. Monkeys are the most knowing and suspicious of the whole animal creation; and I doubt even whether 'High Elms,' with all his science and knowledge of trapping, would catch a monkey without injuring him and spoiling his sale."

The following answers were kindly sent to me, first, by Mr. John Mauley, who writes:—

"In answer to the inquiry by Mr. Buckland, I may say that the country people in the province of Pernambuco, Brazil, catch both monkeys and parrots by exposing for their use a spirituous preparation of calhaça (cane rum) and the fruit of the cajá, a species of spondias or hog-plum, for which the animals have a partiality; this partiality I have verified with animals in captivity.—JOHN MAULEY."

Secondly, by Mr. J. W. Slade, who says:—

"I can corroborate your correspondent John Mauley's answer to Mr. Buckland, by the following extract from Parkyn's 'Life in Abyssinia:' 'These monkeys are caught in various ways. One plan adopted by the Arabs of Tàka has struck me as the most simple, and at the same time as likely to succeed as any other. Large jars of the common country beer, sweetened with dates and drugged with the juice of the *oscher* (*Asclepias arborea*), are left near the places where they come to drink. The monkeys, pleased with the sweetness of the beverage, drink largely of it, and, soon falling asleep, are taken up senseless by the Arabs, who have been watching at a distance.' Monkeys certainly will get as drunk as men if they have the chance.—J. W. SLADE."

Another way of catching live monkeys I read in 'Tecnologist,' Feb., 1862, No. XIX.—"The Sapucaya nuts are found in Brazil, and are also called by the name of 'Pot-plants' or 'Monkey nuts.' They open by a sort of lid, which falls off, leaving a large opening sufficient for the nuts to fall out. So eager are the monkeys to obtain the nuts, that they will thrust their hand into this opening, which they do with difficulty, and grasp the nuts; but the orifice which admitted the empty hand will not allow the egress of a full one, and the animal will torment itself a long time rather than relinquish its hold. The Indians avail themselves of this cupidity to entrap the monkeys. They open the lids of several capsules, and then throw them under the trees; the greedy monkey will not be satisfied with one pot, but will thrust its hands into two, and will not relinquish its hold; the encumbrance renders its capture easy, and has led to a saying amongst the Brazilians, equivalent to our 'Old birds are not caught with chaff;' it is, 'He is too old a monkey to be caught by a cabomba,' the capsule being called by them a cabomba."

In that admirable work, 'The Naturalist on the Amazons,' by my friend Mr. Bates, I was pleased to read yet another way of catching monkeys in the forest. Mr. Bates writes—"The white uakari (*Brachyurus calvus*) are obtained by shooting them with the blow-pipe and arrows tipped with diluted urari poison. They run a considerable distance after being pierced, and it requires an experienced hunter to track them. He is considered the most expert who can keep pace with a wounded one, and catch it in his arms when it falls exhausted. A pinch of salt, the antidote to the

poison, is then put in its mouth, and the creature recovers."

I once bought a wretched, forlorn-looking African creature for the sum of 4s. This was real charity to the poor beast, for his "dog-dealing" master, disgusted with him, "because he cost him 6d. a day to grub him," had just concluded arrangements for a "monkey hunt," which of course did not come off, as the monkey was not forthcoming.

On bringing him home, I found that about an inch of his tail was as hard and dry as the end of a faggot stick. I therefore took out my pen-knife, and, as I had been taught to do by the owner of the "Happy Family," gradually pared it away. I expected every moment master monkey would have resisted and shown fight; but no, as long as I gave him no pain he made no resistance whatever, but sat down on the table as quietly as possible, while he looked on as though I was operating on the tail of some other monkey, and laughed and grunted at the fun. At last I pared his tail down close to the living skin and bone, and hurt him a bit. Reader, if you have had a corn cut, and been hurt in the operation, you can appreciate the tremendous expostulations and grimaces, on the part of the monkey, which he poured forth with all his might the moment I came down to the "quick of his tail." The operation was, however, quite successful, and the monkey, after his tail was diminished in size, immediately began to improve in health and in personal appearance. It is a curious fact that monkeys with prehensile tails never gnaw or bite them; they seem to know too well that this "third hand" is too valuable to be used for food, even by themselves.

The owner of the "Happy Family" told me that the greatest difficulty experienced in making "his family continue in a state of happiness," is to supply a vacancy caused by death or accident among its members; for like boys at a school, the aborigines surround and tease the fresh comer. When it is found desirable to fill up a vacancy in this miscellaneous collection of birds and beasts, the new arrival is placed in a portion of the cage divided and separated from the rest, where free liberty of speech is allowed, but yet "paws off" is the order of the day; in this manner reconciliations soon take place. There is one animal, however, which, above all others, is difficult to tame—it is the hedgehog.* There is more trouble required with this creature than with any other, for he is of a morose disposition, and timid withal; and it is a long time before he will fraternize with his fellow prisoners, for he coils himself up in a lump, sets his bristles in formidable array, and "the more you stir him up the more he won't uncoil." Hares, too, are difficult to tame; and it is a curious fact, that I have learned from several quarters, that hares differ much in mental ability, some being very stupid, others very clever. In judging of the performing abilities of a young hare that is about to commence a course of instruction on the drum or tambourine, notice should be taken of the diameter of the forehead, for experience has laid it down as a law, that with hares, as with men, the more brains

* I do not quite agree with this statement of the showman, that hedgehogs are difficult to tame, for I have had many of them; still, however, they will, *unless very tame indeed*, coil up at the slightest alarm. See my 'Curiosities of Natural History,' Second Series.

they have in their skulls the better learners they become.

It has often been a subject of regret to my mind, when reading the accounts of sportsmen and naturalists of their doings in the pursuit of wild animals, whether in the desert or in the forest, that more attention is not paid to the observation of the habits of the animals, and that their "social customs" should not be more attended to; for depend upon it, all animals, whether wild or tame, have their customs and habits as much as we have, and of these we know little or nothing. Most animals quickly ascertain the presence of man; in an instant they are on their guard, waiting for their enemy. What can the sportsman then tell of their habits? Let him at this moment (unless pressed by hunger) put down his rifle and take up his telescope, and he will most assuredly learn something he did not know before, and will probably ascertain some fact in natural history hitherto unknown to science.

In reading the accounts of the pursuit of the mighty elephant in the jungle of India, of the watching for the beasts of the forest drinking at midnight at the lone desert fountain in Central Africa, of the fierce gorilla in the dense forests of the tropics, or of wild ducks and swans on some lone lake or swamp, I often come on the most exciting description of the discovery of these creatures, feeding quietly and undisturbed in their native homes. What a chance, what an opportunity of learning their habits, and their loves, and their wars! But—No—man thirsts for their blood. A few lines further down in the page of the book we read the old story—I mentally hear the ring of the rifle or gun—and

in an instant a beautiful scene of Nature is ruthlessly dissipated. The frightened creatures fly hither and thither; what was but just now all happiness and quiet, dissolves itself into bloodshed, turmoil, and misery.

There are thousands of "Happy Families" of Nature's own making, enjoying life and health in solitary and lone spots all over the face of the earth. I grant that man has a right and just power given him to destroy, either for food or raiment, all creatures below him in creation, but he should not wantonly abuse this power—let him temper it with mercy. The possession of the hunted beast or bird is never equivalent to the pleasure of its pursuit. *Life is easily taken away, but life can never be restored. Every living thing, after its kind, enjoys life and happiness: let it be the privilege of those who have the much-envied opportunities of observing Nature's handiwork in the forest, the desert, or the field, to open their eyes and drink in knowledge at a small price.* (See Appendix.)

Let a knowledge of the habits of an animal or bird be of far greater value to the sportsman-naturalist than the possession of its bleeding carcass, from which all that we can learn of its habits must be by examination of its structure. Many a volume might be written upon the habits of animals, but it never can or will be written unless the advantage of observing living creatures be impressed upon sportsmen, who will have to carry home a lighter bag, but yet more than its equivalent in the knowledge of new and valuable facts.

Nature has ordained that *all* her families should be happy. The poor man in Windsor fair demonstrated to

us, practically, the pleasure of looking at and observing animals and birds undisturbed, and without the fear of men among them. Let those who have the opportunities learn from him, and let them stay the *wanton* hand of destruction.

If travellers and sportsmen will only do this, they will add to their own—and at the same time not deprive other creatures of that most valuable of all possessions—
HAPPINESS.

PETHERICK'S HIPPOPOTAMUS.

WHEN my friend, Mr. Petherick, the well-known explorer in Central Africa, arrived in London, some three or four years ago, from Khartoum, Sudan, Upper Egypt, he brought with him a young hippopotamus. In one of his expeditions he came (he told me) into a lake full of vast beds of reeds, between which there flowed little streams of water. When sailing slowly along, the man at the mast-head (who was looking out for open passages among the reeds) descried a small dark-coloured mass upon a bed of reeds. This object they made out to be a baby-hippopotamus, left by itself by its mother, who doubtless, when she left her home, thought her young one was safe enough. The men jumped into the water, and catching the little rascal in their arms, brought him into the boat. During this operation he cried and squealed lustily, after the manner of our familiar porcine friends at home. He was a baby, and not a fine baby at all for a hippopotamus, for he was not much larger than a terrier dog, and probably not more than about two days old. The mother-

hippopotamus luckily did not hear the screams of her infant, or there would have been a fight between biped and quadruped for the possession of the "squeaker."

Young Hippo was consigned to the care of one of Mr. Petherick's Arab hunters, Salama by name, who brought it up with the greatest care, and, I may say, affection. Mr. Petherick brought down the Nile with him no less than four live hippopotami: this one I am writing about alone survived out of the number. Two of these animals were lost in consequence of the boat in which they were striking on a rock in the cataracts and sinking. One of the animals was hampered in the boat, and was drowned; the other swam to shore, and of course escaped; the third died a natural death.

When the first hippopotamus, in the year 1850, was sent over from Egypt, he was provided with all sorts of creature comforts; an army of cows and goats accompanied him, to afford him milk; he had a huge portable bath to bathe in, and, in fact, travelled *en prince*.

His less fortunate relation arrived in much more humble style. When the dray arrived at the Zoological Gardens from the railway station, we were all of course very anxious to see the new arrival. When the tarpauling was taken off, there was discovered a huge box, made of strong deal boards, like a diminutive railway horse-box, and in this Hippo had travelled all the way (with an occasional bucket of water thrown over him) from Alexandria, thereby proving an important fact, that he can dispense with the bath without other prejudice than a rough skin. How to get him into his sleeping-apartment was the question.

Salama assured his master that Hippo would follow him anywhere. One side of the box, therefore, was taken off, and out the poor frightened beast walked. Salama gave him his hand to smell, and he trotted after his kind protector with a long, steady, calf-like trot, swinging from side to side, while he kept his head close to his master, staring about him like a frightened deer.

He was about the size of a very large bacon hog, only higher on the legs. From not having been able to have a bath for six weeks or more, his skin had assumed a curious appearance; the back, instead of being soft, slimy, and india-rubber-like, was quite hard and dry, and the skin was peeling off from it as from the bark of a tree; it was, in fact, much more like a bit of an old forest oak than of a water-loving animal. It was of course expected that the moment Hippo smelt and saw the water he would rush into it; but no—he merely went up to it and smelt it with a look of curiosity, as though he had never seen water before; and it was not till the Arab advanced himself partially into the water that Hippo would follow. He soon came out again, and was only persuaded to go right in to the deep part of the water by the Arab walking round the edge of the tank. Hippo then began to find out where he was, and how comfortable the warm clean water was. Down he went to the bottom, like a bit of lead; then up he came with a tremendous rush and a vehement snorting; then a duck under, then up again, prancing and splashing in the water after the manner of Neptune's sea-horses that are harnessed to his chariot

in the old pictures of the worthy marine deity. I never recollect to have seen any creature, either man or beast, so supremely happy for a short time as was poor travel-worn Hippo after his long voyage of so many thousand miles.

Coming out of the water, Hippo smelt about for food; mangold-wurzel was given him, and mightily did he enjoy it.

Like all young animals in a strange place, he kept a close eye upon his keeper, and gave a peculiar half-bellow, half-cry, when he went out of his sight, refusing food until his return. Evening soon arrived. Hippo retired to rest by the side of his faithful nurse, who reported the next morning that, whereas, on ordinary occasions, if he coughed or moved, or made the least noise in the night, Jamooss (the Arabic for hippopotamus) would wake up and answer, the night of his arrival he slept a sound sleep, waking only at sunrise for his breakfast and his bath, which he again mightily enjoyed. His skin soon began to lose its bark-like appearance, and to get soft, slimy, and of a black, pinkish colour.*

Though tame enough to his keeper, Bucheet (for that was the familiar name his keeper gave him) had a temper of his own, which he would occasionally show to strangers.

As regards the danger to be feared from the hippopotami when at home, Mr. Petherick told me that they are not to be feared when the traveller is in a large boat,

* This hippopotamus is now in America. He was sold, I believe, to Barnum for a large sum of money. I should be curious to know under what name this king of showmen advertised him to the public.

but that they will follow with intent malicious the smaller rowing boat. They will make their attack in two ways, either by rushing in a succession of springs or bounds, every one of which brings one-half of the body out of the water, and, when alongside, rise open-mouthed and endeavour to carry off some one on board; or by driving full speed under, and using their immense head as a battering-ram, strike the boat with such force as to make her quiver from stem to stern. Mr. Petherick has known planks knocked clean out of the side of a boat, sinking her almost instantaneously, and before the shore could be reached by her astonished crew.

On one occasion Petherick lost a man out of the boat, the hippopotamus rising out of the water, and seizing him in his fearful mouth. The body was cut in two by the animal's teeth. The hippopotamus cannot bear to be cut off from the water, and on one occasion one of his hunters was tracking a beast that had gone inland. The brute heard him, charged him, turning round sharply, and, catching him before he could get out of the way, tossed him high up in the air, without, however, doing him more bodily harm than frightening him out of his wits. Nothing could afterwards induce this hunter to follow hippopotami on shore on further night expeditions. They make a fearful bellowing and crying noise at night, often to the traveller's great discomfort.

My late friend, Dr. Genzick, of Vienna, told me that he once shot a hippopotamus. He got a fair and steady aim at him, the beast probably imagining the man in the boat did not see him, as he had sunk himself deeply into the water, leaving his nose and eyes only

exposed. The ball struck the hippopotamus full on the head, and he sank instantly to the bottom, where he kicked up such a turmoil that, as Genzick said, "one would have thought there was a steam-engine gone mad at the bottom of the river." However, the Doctor never found the hippopotamus, though he hunted everywhere for him, but the next year he discovered his whitened bones upon a sand-bank some distance from the place where he had shot him. He knew it was the beast he had shot the year before, for he recognised the bullet he found in his skull as his own make.

During a visit to Paris, some six years back, I heard that a young hippopotamus had just been born at the *Jardin des Plantes*. I went up to see it, but it was dead. It appears that the poor little thing was born in the water, and paddled round and round the sides trying to get out; the mother endeavoured to help it up with her head, but she somehow managed to injure or else drown it. I believe, in the spring of 1865, another young hippopotamus was born at the *Jardin des Plantes*, and was taken from the mother immediately at birth. Dr. Sclater exhibited drawings of it at the late meeting of the British Association at Birmingham. He reported that it was alive and well.

Every one is well acquainted with our old friend, the hippopotamus at the Zoological; but everyone may not know that he once had a tooth drawn, and that by a non-professional dentist, and with a pair of forceps made expressly for the purpose. Mr. Bartlett was the operator, and I think, after the reader has read his communication, he will agree with me that he deserves great credit for his ingenuity and the surgical skill he displayed

with his huge patient. Mr. Bartlett writes to me as follows:—

“MY DEAR MR. BUCKLAND,

“You will be glad to know that I have succeeded in performing perhaps the largest, if not the greatest, dental operation on record.

“Our male hippopotamus has been, as you know, suffering from a fractured tooth, and fearing that the consequences might be serious, I had a strong oak fence fixed between his pond and the iron railings, and I then determined to remove the broken tooth; this I accomplished on the morning of Wednesday last, but not without a fearful struggle.

“I had prepared a powerful pair of forceps, more than two feet long; with these I grasped his fractured incisor, thinking, with a firm and determined twist, to gain possession of that fine piece of ivory. This, however, was not quite so easily done, for the brute, amazed at my impudence, rushed back, tearing the instrument from my hands, and, looking as wild as a hippopotamus can look, charged at me just as I had recovered my forceps.

“I made another attempt, and this time held on long enough to cause the loose tooth to shift its position, but was again obliged to relinquish my hold. I had, however, no occasion to say, ‘Open your mouth,’ for this he did to the fullest extent; therefore I had no difficulty in again seizing the coveted morsel, and this time drew it forth, with a good sharp pull and a twist, out from his monstrous jaws. One of the most remarkable things appeared to me to be the enormous force of

the air when blown from the dilated nostrils of this great beast while enraged. It came against me with a force that quite surprised me.—A. D. BARTLETT.”

Chunie, the elephant that was so barbarously “murdered” in Exeter Change, because he was “mad,” was a terrible contrast to the above case. This poor elephant was mad, but he was mad *with the tooth-ache*.* If there had been a Bartlett in charge of him Chunie would never, I feel convinced, have been shot; for he would have found some means or other, probably by making an incision down to the root of the diseased tusk, of relieving the intense pain that the poor brute must have suffered. (See Appendix for an account of the slaughter of the poor animal.)

* See the tusk itself in the Museum of the Royal College of Surgeons.

FOXES.

WE are too much in the habit of hunting, shooting, destroying, or otherwise tormenting the living representatives of the fauns and satyrs of our woods, lanes, and hedges. How much greater would be the pleasure if we watched them a little more, and observed their instincts and their habits.

There are great disputes among philosophers as to the nice distinctions between reason and instinct. We want an animal Lavater, who, from the physiognomy of animals' faces, would tell us what kind of mind, whether ferocious, tameable, cunning, or stupid, the animal under examination *ought* to possess. This great philosopher has, indeed, made a few observations on the point. Thus, he remarks, "The skull of the dog speaks, as I may say, determinate powers of sense. The throat is rather that of tranquil than cruel or ravenous appetite, though it participates in both. I imagine I discover in the eye-bone and its relative proportion to the nose a degree of fidelity and sincerity. Though the difference between the wolf and the dog is small, still it is remarkable. The concavity of the skull, the convexity above the eye-bones, the straight lines from thence to the

nose, denote more hasty motion. The under jaw has likewise the stamp of malignity." Here, then, is a problem for the reader. Let him imagine himself in bodily presence in "*Scholis mathematicis et physicis*," at Oxford, with those fearful instruments of torture—two new pens, a sheet of unstained blotting-paper, and painfully blank sheets of foolscap—before him, the outer sheet being headed with questions such as follows:—

1. Describe accurately the physiognomy of the fox as compared to that of the laughing hyæna.

2. Compare the habits of the tame pet fox at New College with that of the fox which Jim Hills, of the Heythrop Hunt, lost at Tarwood.

3. Translate into Greek iambs

"When he got unto his den,
Where were his little cubs,
Eight, nine, ten.
He cut up the goose
With his pocket-knife,
And the little ones scrambled
For the bones oh!"

4. Who was the author of the above poem? and state your grounds for belief that the fox referred to resided in Bagley Wood, near Oxford.

5. State the arguments you would use to the Censor of Christ Church that a fox was not a dog, and that, therefore, the fines "for having a *dog* in your room" were not applicable to your fox.

6. Prove by the rules of Aristotle "that vulpecide is murder," and is punishable accordingly by the laws of Squirearchy.

7. Why do German students call a freshman a "fox?" What is the name of the plant that smells like a fox?

Who was the Frenchman who hallooed the hounds to a squirrel?

8. Translate into Greek, after the manner of Herodotus, the following true and authentic story of the American fox-hunt, and state who you conceive to be the author of it:—

“A certain Jonathan being determined to open his public-house with a sensation scene, advertised that a fox-hunt would take place on the premises, and invited customers to bring their own hounds. They arrived accordingly in multitudes, and having performed libations of beer, proceeded to the sport. The fox was forthwith let loose, seeing which, the customers also loosed their dogs, which were of divers sorts and colours. One of these, being a fierce and rabid animal, not knowing the cause of his liberation, attacked another dog, upon which the masters of the dogs, having wasted many words, set to fighting also. The others then seeing the tumult also engaged in fight, and much was the blood that fell from their noses, and great was the darkness that suddenly overshadowed their eyes. The dogs, too, of the various combatants also immediately fought with bloodshed one against the other. The fox in the meantime, being a tame fox, seeing this sought not to escape from his enemies, but sitting up, on his haunches a little distance off, witnessed the combat, and laughed heartily.” This account of the American fox-hunt I have from the highest authority, and it is worthy of record.

While the reader is answering these questions on paper, your humble servant will proceed to say somewhat about the animal itself. In the first place, it is

not often easy to see a fox in his native covert, though you may know there are several about; failing this, good practice in observation may be obtained by examining his footsteps, and concluding from their appearance what the fox has been about. In order to do this, soft mould or sand should be scattered about the place where the fox is likely to come, and you will thence learn the difference between the track of a dog and of a fox. I shall here give the notes on this point of an observer, who wrote a valuable book, entitled the 'Vermin Catcher,' in 1768. He says:—

“It may not here be unnecessary to lay down some rules to distinguish the dog-fox from his wife, which may easily be done without seeing them, by adhering to the following observations:—A dog-fox has a larger foot than a vixen, and it much resembles that of a small lurcher-dog, and has been often mistaken for one by those who do not examine things minutely; but there is an essential difference, for the fox has hardly any ball to the heel of his foot, but the dog has a large one, and the female fox has likewise a small foot, with the ball thereof still considerably less than the male.” Here, then, is a nice amusement for those who have the good fortune to live where foxes are about, and are willing to improve their woodcraft.

It is not uncommon to hear of three-legged foxes being killed. The cause of the loss of the third foot is generally a trap, and I am convinced that the story of foxes gnawing off their foot is true. It may be urged that the pain of the self-amputation would prevent the fox from doing this; but it must be recollected that the trap, having cut off all circulation from the lower part

of the foot, it would become dead, and numb to all feeling.

My friend, Mr. Bartlett, tells me a story relating to this point. He once had a fox consigned to him for stuffing, which had only three legs. When he sent the animal home the gentleman to whom it belonged was much surprised to find the fox had four legs, and that the missing one had been restored. He asked Mr. Bartlett how this was, and he gave the following explanation. When he came to dissect the fox he examined the contents of his stomach, and found in it the missing foot, much gnawed by the teeth, but still perfect enough to enable him to prepare it and restore it to its proper position. It was quite evident that the fox had bitten his foot off, and, in his agony, had swallowed it.

A curious case of injury to a fox's leg was reported by myself in 'The Field,' in March, 1863. Mr. E. Ward writes as follows:—

I send to 'The Field' office, for Mr. Buckland's inspection, two bones of a fox—the ulna and radius. Reynard's path through life had evidently been anything but a smooth one; but, being a remarkably fine fellow, I have him to stuff. These bones, which belong to the near side foreleg, appear to me to have been badly broken by the animal having become entangled by a fine snare, which was found on, and still surrounds, the bones. Reynard was also found, in the stripping off of his jacket, to have met with other dangers, there being a lot of shot lodged under the skin; but he seemed to have quite recovered, and, indeed, was in full condition, bearing no outward marks of having been in the wars, with the exception of having a swelling near the carpal or wrist-bones, caused by the junction of the fracture of the two next them, which I have the pleasure of sending you, but which was not very perceptible with the fur on. After having met with these, and probably divers other narrow escapes of his life, he at last fell a victim to a more legitimate death by the noble sport of fox-hunting.—EDWIN WARD.

My report on the above specimen was as follows:—

“I am obliged to Mr. Ward for allowing me to inspect this interesting specimen. It is quite evident, in a medico-legal point of view, that the fox had been caught by the foot in a wire—probably a rabbit wire. I do not, however, think a positive fracture has taken place; for, upon minute examination, the two bones underneath the swelling show no symptoms of a fracture. The appearance of this accident is, however, caused by a considerable effusion of bony matter round the part which has been so firmly compressed by the wire—the natural consequence of the inflammation of the periosteum surrounding the bone.”

It is wonderful how careless the generality of taxidermists are when they stuff a fox's head. They can, indeed, but rarely restore the wonderful appearance of cunning to the fox, but they can, at any rate, give him a proper shaped glass eye. In nine stuffed fox's heads out of ten, the pupils of the eyes are made round like a dog's, and not elliptic like a cat's. The fact is, that a fox being a nocturnal animal, has a cat's eye, and not a dog's eye. This is a point which should be looked to. Again, it is curious to remark that a fox, when pleased, expresses his pleasure by wagging his brush, like a dog wags his tail.

The poor fox is not often on terms of friendship enough with mankind to show his pleasure; but still I have observed a fox wag his brush, and once only, and this at the Edinburgh Zoological Gardens.

Fox cubs are pretty little amusing things. A man who drove a Hansom cab about London used to have a pretty little cub fox on the top of his cab, and the little

fellow seemed quite at home up there. I was very sorry to hear the other day that this poor man was thrown off his cab coming from the Epsom races, and that both he and his fox were killed on the spot.

A great number of cub foxes are sold every spring at Leadenhall Market; they are imported from France and Germany, and sold to owners of packs of fox hounds. I have seen as many as twenty or thirty of them all huddled together in a big flat box. When the cover is opened, and one peeps into the box, it is most curious to see all the beautiful little heads of the dear little cubs crowded together, and their lustrous diamond-like eyes staring at one.

I have lately heard of an ancient village dame who had a litter of cub foxes and a cow given under her charge, the whole produce of the milk of the cow to be devoted entirely to the cubs. Old Mrs.—— was faithful to her charge, and got up at dawn to feed them every morning. She succeeded in rearing the whole number, and five out of the seven cubs were vixens. They were all turned down when they arrived at foxhood; but long before this time the worthy old dame began to complain. “Lor, master, do’e be so good as to let them things go; they gets so tarnation big now that they fights and scratches like a lot of young fiends when I gives ’em their victuals; and they pretty nigh stinks me and my daughter out of house and home. Now, do’e, sir, let ’em go, poor dears.” I need hardly say the old woman’s request was complied with, and the “poor dears” have long since done their foster-nurse credit by the excellent sport they have afforded before the hounds.

Ladies have, I believe, as a rule, a better chance

than gentlemen of taming wild animals, as the following will prove. My excellent and kind-hearted friend, Lady Hornby, told me that she once expressed a wish, when residing at Constantinople, to try if she could tame a wild Turkish street dog, and asked some gentlemen to catch her one.* They accordingly went out in pursuit, and in due course of time brought home their capture alive, half dead with fear, and as savage as possible.

The poor hunted thing immediately ran for protection to Lady Hornby, and would not quit her side. She tied it up in the stable, and by taking to it and feeding it herself, managed to make it quite tame. One day she was showing her pet to a gentleman who knows a good deal about animals.

When he saw it he said, "Why, Lady Hornby, what have you got here?"

"Oh, it's my tame street dog," was the answer.

"It's no street dog at all," said——; "it's a common brute of a wild jackal."

"Anyhow," said the lady, "dog or jackal, I have tamed him now, and don't mean to part with him,"—a plain proof to all that female influence can tame the most ferocious of animals.

Our friends should be very careful how they injure vixen foxes at the time they are likely to be in charge of cubs laid up. In April, 1863, a "Warwickshire squire" kindly sent me seven dead fox cubs found in a pollard oak, wishing to know if I could ascertain the cause of death. They were exceedingly pretty little things, and at first sight might be taken for young black and tan terrier pups. The eyes, of course, were closed; but a touch of the knife soon opened the eyelids, and then

they looked more like foxes. The tongues were enormous, compared to the size of the head, and the back part of the mouth and the sides of the upper jaws were beautifully adapted to hold on to the mother, reminding us somewhat of the arrangement of the palate and fauces as described by Professor Owen in the young of the kangaroo.

The first characteristic that struck me as common to them all, when placed in a row, was the fact that their mouths were dirty. Upon closer examination I found the tongues, the palates, and the back regions of their mouths covered with "dirt." Upon examining this dirt under the microscope, I found it to be principally earth mould and decayed vegetable matter. I then opened them, and found the lungs (the appearance of which, by the hydrostatic test, showed they had breathed air) and the rest of the internal organs were perfectly healthy; the stomach I found to contain portions of the same dirt as was in the mouths, and also a *very little* white-looking substance, which the microscope told me was milk, the milk globules being easily distinguishable. My idea upon the subject is, that these cubs were born alive and suckled by the mother; she then, from some cause, was either driven away from them or else deserted them spontaneously; they remained alive as long as the milk in their stomachs would last them, and that then, suffering from hunger and thirst, the poor little things crawled about the bottom of their nursery crying for their suppers, and licking up the material which composed the bottom of it. The verdict, therefore is, in my humble opinion, "Died of hunger and thirst, not having access to their

mother." I sent this family of cubs to be stuffed in a family group, with the label, "Babes in the Wood," to show how careful sportsmen ought to be of the mother foxes, and what mischief may ensue to their little families should the poor things anyhow be killed, either intentionally or by accident. After exhibition in 'The Field' window, the group was sent back to the "Warwickshire Squire."

The sign of "The Fox" is not at all uncommon in country villages. At Steventon village, in Berkshire, which formerly was the nearest station on the Great Western Railway to Oxford (before Didcot Station was built), there is a "Fox" public house; and many a time I have had a glass of ale there in my younger days, when acting as whipper-in to the Berkshire fox hounds, of which my late uncle, Thomas Thornhill Morland, of Sheepstead, near Abingdon, was formerly the master. The inscription on the signboard of the "Fox" runs (if my memory serves me) thus—

"I am a Fox you plainly see,
No harm you can derive from me,
My master he confines me here,
Because I knows he sells good beer."

Having published the above in 'The Queen' newspaper, Cuthbert Bede was good enough to send the following communication:—

"Perhaps the four lines of doggerel mentioned by Mr. Buckland are to be met with in various parts of England; for, in 1851, I saw them on a sign-board in the village of Folkesworth, near Stilton, Huntingdonshire, and then copied them, and sent them to the

‘Illustrated London News,’ where they were published, Dec. 27, 1851 (vol. xix. p. 783). As they vary from the lines given by Mr. Buckland, and are also a remarkable specimen of rustic orthography, they may be worthy of preservation in your pages. A rude figure of a fox was painted on the upper portion of the sign, underneath which appeared these lines, here copied *verbatim et literatim* :—

I . HAM . A . CUNEN . FOX .
 YOU . SEE . THER . HIS .
 NO . HARME . ATCHED .
 TO . ME . IT . IS . MY . MRS .
 WISH . TO . PLACE . ME .
 HERE . TO . LET . YOU . NO .
 HE . SELS . GOOD . BEERE .

“This inscription, being translated, would read as follows :—

“I am a cunning fox, you see ;
 There is no harm attached to me ;
 It is my master’s wish to place me here,
 To let you know he sells good beer.

“The sign-board with its inscription had been there since the earliest memory of the oldest inhabitant ; but within these few years the inscription has been painted over. Folkesworth village lies in the midst of the Fitzwilliam Hunt.”

The days of animal worship are, to a certain extent, gone and past, but there are still many nations upon the earth who keep up the custom with all due honours and observances, and among these may be included

English men and women. It will be immediately asked what animal do *we* worship? The future historian of our age will (if he be jocosely inclined) be able to state, with all truth, that the English people of the nineteenth century worshipped the fox. In the eyes of most of our country squires his life is regarded as sacred, and his death by violence (other than in the hunting field) simply murder.

What are the high festivals in the country so often dedicated to? The fox, and nothing but the fox. We have our social *réunions* at the cover side; we have our hunt breakfasts, our hunt dinners, and our hunt suppers; and even here in London we have our "Fox" Club.

The brush of the fox* is preserved as a trophy of prowess in the hunting-field. "The deep deep draught of the good Rhine wine," is quaffed from his silver mounted skull, and his image is made in gold and silver to adorn our dinner tables.

In country villages in hunting countries, as evening draws on, the orgies of fox worship are celebrated by

* Mr. Edwin Ward, now in business for himself as a taxidermist, at 24, Wigmore Street, Cavendish Square, has shown me a novel and peculiarly ornamental method of mounting foxes' brushes. He has discovered that without injury to the bushy character of the brush, and without cutting the brush or introducing any foreign fur or material into it, no less a number than fifteen distinctly-marked rings of alternate red and white may with ease be produced in the process of mounting a fox's brush. This is certainly a novel and most ingenious idea, and gives the brush the appearance of belonging to a new and extraordinary species of fox, but at the same time being very pretty in appearance. I have never seen anything like it before, and strongly recommend gentlemen to have a brush or two mounted in this manner as ornaments for their drawing-rooms or studies.

copious libations of beer poured down the throats of those interested in his welfare, and by incantations, partly melodious, but mostly vociferous.

In higher circles wine is used in the invocations to "the God Fox;" and there is a story on record, that a certain Head of — College, Oxford, who understanding not the meaning of terms used by certain young fox-worshippers in one of their midnight celebrations, was much alarmed at being wakened at midnight by a most unusual uproar.

The next morning he sent for the whole party, and when they were all arranged in a row in the terrible study (the execution-room of so many delinquents), the worthy Don thus addressed them :—

"Gentlemen, I understand that last night you were holding an uproarious fox-hunting supper. You may be aware that the pursuit of the fox, either by dog or gun, is contrary to the statutes of the University.*

"I heard from my windows, at midnight, many un-academical expressions, new and strange to my ears, frequently made use of by you; and, among them, I heard the words 'gone away,' 'gone away,' frequently and distinctly repeated; these words being in every case followed by the most tumultuous applause.

"Now before I set you the impositions which you will of course receive, and which you really deserve, I must really beg to ask you, collectively and individually, to what member of this college you intended to apply the

* "Statutum est quod scholares abstineant a venatione ferarum cum canibus cujusunque generis, Viverris, Retibus aut Plagis; necnon ab omni apparatu et gestatione Bombardarum et Arcubalistarum sive etiam accipitrum usu ad aucupium."—*University Statutes*.

words 'gone away;' and insist upon your immediately informing me *who has dared to leave the college without my express permission in writing?*"

There is a story told of this dear old Don, alas! no longer among us, whose name began with a J, and was Master of B——l College, Oxford (my Oxford friends will recognise him at once), that he was returning one day from his constitutional ride on his quiet old cob along the Abingdon road. When he came to the turnpike he felt in his pocket for some money. Alas! he had none.

"My good man," said he, "I am Master of B——l College,* and you must let me pass."

"I don't care," was the man's reply, "what you be master of; you ain't master of twopence, and you can't go through *my* gate."

And at the turnpike gate the old gentleman remained sitting on his cob till some of the very undergraduates who had lately received a jobation for fox-hunting came up dressed in their pinks, and paid the twopence for the worthy master. The undergraduates were rather frightened when they first saw the master, as it were, lying in wait for them, but in his pecuniary difficulties, he dispelled their fears by exclaiming, "I don't see you gentlemen, I don't see you."

* The heads of houses at Oxford are called by different names, as Dean of Christ Church, Warden of New College, Rector of Exeter, Master of Baliol, &c.

THE TURKISH GUARD DOG ARSLAN.

IN May, 1863, I received the following letter from my friend Sir Edmund Hornby, at that time Judge of H.B.M. Supreme Consular Court at Constantinople:—

“I have obtained a dog for you. He is a splendid animal of the Koordish breed, and was procured from the district of Erzenhiern, from the shepherds. He is ten months old. His father guards a flock of sheep of two hundred against any wolves, and has killed several. His name is ‘Arslan,’ which means in Turkish ‘the lion.’

“He is very fierce to other dogs, and, young as he is, has already killed several. He is difficult to tie up, on account of the size of his neck, and would be much more mild if left untied; but then I would not give much for the life of anybody who bullied him, or who came uninvited or unIntroduced into your room, or who attempted to garotte his master.

“He is accustomed to cold and prefers it to heat, as his coat shows. His ears are cut, in order not to get them lacerated when fighting wolves, hyenas, the panther, or black leopard, &c., &c.”

Having received Sir Edmund's letter, I was all impatience to receive the dog. The ship 'Scotia,' on board which he was placed at Constantinople, arrived, after a protracted voyage, at Liverpool. At length, by the aid of a great deal of writing and telegraphing, the dog was one morning announced in a Parcels Delivery Cart.* On my first introduction to him he was not over agreeable. No amount of verbal "soft sawder," or offerings of meat, bones, water, milk, &c., would get a wag out of his tail; and I was obliged to call a brother officer, learned in dogs, into consultation as to what should be done with him. We agreed that the best thing would be to leave him alone, and show him we were friends, not enemies. We led him quietly about the barrack-yard, and in a few hours he found out that we were kindly disposed towards him, and ultimately we were the best of friends.

I thought at first that my dog might possibly show some of the wonderful guiding instinct of the English shepherd dog, but experience shows that he does not. He is possessed of great quickness of sight and hearing, and will sit quietly for hours together simply watching. This, I understand from Lord Strangford, to whom I have shown him, is exactly his character. He does not act the part of the ever restless, flock-marshalling collie dog, but simply mounts guard on an eminence near his flock, and acts the part of a sentry to them and his master. He may be encountered on the mountains at a considerable distance from his flock, simply wander-

* I must here express my thanks to Mr. (now Captain) Pallett, then mate of the steam-ship 'Scotia,' who took the greatest care of the dog when on board ship.

ing on a lonely patrol. He will not attack an intruder unless he approaches too near to the hut or flocks of his charge. He will follow the solitary sportsman or pedestrian for miles, keeping a short distance in the rear, as if determined to see him well off his territories. The shepherds depend much on their guard-dogs, for not only the safety of their flocks, but also for their own personal protection by day and night, and will, I am assured, think nothing of firing on a stranger if he attempts to injure their dogs.

They are very jealous of parting with the breed, and dogs of this kind are therefore seldom seen in England. My dog was presented to Lady Hornby by J. Stephens, Esq., H.B.M. Consul at Trebizond, who values his pure breed exceedingly. I can only hear of two other specimens having been brought to England, and these during the Crimean War, viz., the one by the Lady George Paget, the other by Lord Stratford de Redcliffe.

Since I have had Arslan in my possession I have found him of a very amiable disposition to those he knows and who are kind to him, for he is very susceptible of any little attention shown him. With dogs, however, he wages the fiercest war; his sole aim and object in life seems to be to attack and kill any unfortunate fellow-canine that comes near him, and this without the least provocation. Arslan has picked up several curs in the streets and handled them most severely; one of these I had an opportunity of examining, for his remains were brought to me the day after the combat. The wounds Arslan had made were terrific. All this happened when I first received my formidable friend. He is now never allowed to go out

without a muzzle, and I never dare trust him without his chain and collar, which latter I have ornamented with bells such as are worn by the post-horses in France, or he is sure to pick up a dog.

Strange to say, Arslan never touches my little Scotch terrier dog, "Danny." We had a great difficulty at first to prevent him killing her. After a time, however, I suppose instinct taught him that the little dog was one of the family as well as himself, and Arslan and Danny are the greatest friends possible. He barks when Danny barks, and Danny joins in chorus when her gigantic friend sings a song. The cat and Arslan have had terrible fights, but the cat, holding her own social position, and not interfering with the big dog's privileges, Mr. Arslan has given in at last, and the cat is now quite his master.

His temper is truly affectionate, and he cannot bear to be left alone a minute. When shut up he positively sobs to be let out; if he can only be in the company of human beings he is quite comfortable, and does nothing but sit and watch for hours at a time in the balcony in Albany Street. When he is not watching he sleeps with his huge carcase stretched, just like a great lazy Turk, out on the floor, but never near the fire. When I show him his muzzle and collar he jumps about, and knows it is his out-door dress, and runs to have it put on. His muzzle makes him look very savage, and condemns him in the eyes of strangers, but he will never hurt man, woman, or child. The poor dog has evidently been brought up to kill dogs, and it is his business. As a proof of this, when he picks up a dog, he looks up with mild beautiful eyes, expecting me to pat him and praise him—not punish him—for what he

has done. One day I sent my regimental servant, G. Badcock, to the Paddington station with Arslan, and in an unguarded moment, Arslan being unfortunately without his muzzle, he picked up a wandering cur that came suddenly round the corner. Badcock did all he could to get him off the dog, when some fellow—he could have been no Englishman—came behind the dog and stabbed him with a knife in several places; he then, like a brute, tried to cut his tail off. Arslan was brought home to me bleeding fearfully. I examined his tail, and found an artery cut right across, bleeding furiously. I tried to catch it with my surgical tenacula, but could not on account of the hair. I eventually, after being nearly deluged with blood myself, managed to stop the hæmorrhage with muriated tincture of iron, matico leaf, and firm pressure. If I had not been a medical an Arslan would certainly have bled to death; as it was, he was very faint, and I was obliged to give him ammonia, &c. I have since this doctored his tail, and it is, luckily, none the worse for the wound, as it was not cut at a joint. I never could get the name of the fellow who *used the knife*.

I find that Arslan invariably feels the heat very much; for he always chooses the coldest place he can find to sleep on, and, if straw is given him, scrapes it away to lie on the bare ground.*

The strength and power of my giant dog are terrific; he is just like a great wolf to hold. I am not very weak myself, and I find that when he puts out his strength it

* He measures at the shoulder 2 feet 6 inches, from the ground to the top of the head 3 feet 2 inches, total length from nose to tail 4 feet 11 inches.

is all I can do to prevent myself being pulled bodily over. I send my page-boy, John, out with him daily for a walk. The dog at first used to run right away with John, like a runaway horse in a gig, but he has learnt better manners lately, and now he never attempts to bolt.

At dinner time every day Arslan takes up his position in the sitting position of the "Cave canem" dog, by the head of the table, waiting for bones and scraps. The moment he sees the *cheese* put on the table he sneaks down stairs, as quiet as possible, into the kitchen, to watch for more scraps. Experience has taught him that after the appearance of the cheese no more meat comes to table, and his Turkish tastes do not reconcile him to cheese.

Since Arslan's arrival I have received the following note from a gentleman holding high position in the army, and who is well known as a traveller and an observant sportsman, who gives his experience of Arslan's relatives in their native homes as follows:—

"DEAR BUCKLAND,

"Having paid a visit to your dog 'Arslan,' and having read with great interest your account in 'The Field,' I have thought that you might possibly like to hear more particulars respecting this curious breed of dogs, whose acquaintance I first made on the Albanian hills, whilst cock-shooting in the winter of 1859-60.

. "Though every flock that one meets with has one or more of these redoubtable guardians attached to it, I have never seen them used as sheep dogs, according to our acceptation of the term. Indeed, the sheep 'follow the shepherd,' in the Eastern fashion, without

any driving at all; and the sheep dogs are simply used to guard the flocks against depredators—biped as well as quadruped—and this they do most effectually.

“So much importance do the Albanian shepherds attach to the fierceness of their ‘skillies’(?) that, however savagely the innocent wanderer in search of woodcocks may be attacked, the owner of the dog will *never call him off*, for fear of spoiling him. Any sportsman who has visited Albania must know them well, and has, doubtless, like myself, often wished them on ‘t’other side o’Jordan.’

“An Englishman starting for the Albanian coast is always warned that under no circumstances must he ever *shoot* one of these dogs (which, by the way, he is often sorely tempted to do before he has been long among them). ‘Shoot my dog and I’ll shoot you,’ seems to be the Albanian version of the old English proverb, ‘Love me love my dog.’ However, if seriously attacked by them, there is a saving clause in this ‘rude law of the mountains.’ If a dog comes near enough, you are allowed to *stab* him; his pressing you so closely being considered to warrant an appeal to cold steel in self-defence, the verdict in such a case being ‘justifiable canicide.’ For this reason, whilst shooting, it is the custom to carry a knife, resembling in shape that used by a *chef de cuisine*, and which fixes by a spring into the inside of one of the barrels of your gun.

“I generally found a bold front, and the fixing of this formidable weapon a sufficient passport for myself and dogs in the neighbourhood of an Albanian village or flock, but on one occasion I was forced to use it to secure myself a safe retreat.

"It was on the very last day of my *séjour* in Albania, where I had spent some weeks in a native village in the interior, with four friends. On the way down to our yacht I got separated from the rest of the party, and found myself on the top of a high cliff overlooking the sea. I stood admiring the scenery, with my face turned towards the cool sea-breeze, when I was suddenly attacked from the rear by one of these formidable antagonists, his owner, 'a wild Albanian, kirtled to the knee,' looking calmly on from a neighbouring eminence. I tried picking up a stone to throw at him, but my stooping only allowed my antagonist to steal a yard nearer to me. I began to feel very uncomfortable. Fancy yourself on the edge of a precipice, with an 'Arslan' keeping guard over you by describing short semicircles round you, showing his teeth the while, and growling in a very ominous manner, and I think you will allow that the situation was as critical as that of a great Yankee general after a 'glorious victory.' After standing thus 'at bay' for what appeared to me to be a considerable time, I at last determined to risk an advance, and proceeded to 'fix bayonets.' No sooner did he see the flash of the steel than my antagonist sprang straight at me. I instinctively lowered my point, which entered his chest, passing out behind the shoulder. He fell at my feet, unfixing my bayonet in his struggles. After lying still a short time, he rose and beat a retreat, the bayonet still transfixing him.

"I tracked him for some distance by his blood, over the broken ground, and at the end of 100 yards or so I found my bayonet (which, I suppose, he must have drawn out with his teeth) lying in a pool of blood. I

was only too thankful to recover my weapon and my liberty to think of continuing the pursuit ; and I returned to the yacht impressed with a very great respect for the Albanian king of dogs, who is undoubtedly first cousin to the Turkish one.

“ As far as my experience goes, they will face anything—man, wild boar, wolves, or anything they imagine to be interfering with their master’s rights ; and, though ‘ bullies ’ to the smaller of their own species, they are by no means cowards when thoroughly roused.

“ C. L. P.

“ May 28, 1863.”

Arslan is still alive and well, and I shall be pleased to show him to any of my readers who would like to call at 37, Albany Street, Regent’s Park.

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